Clinical Lectures ON THE PATHOLOGY OF HYSTERIA.

Delivered at the West End Hospital for Diseases of the Nervous System, Welbeck-street, W.,

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I.—HYSTERICAL ATTACKS.

GENTLEMEN,—At one of our previous meetings I drew your attention to some of the important consequences which may result from disturbances of the vaso-motor and sympathetic systems,[1] and I promised to return to the subject on a future occasion. That promise I propose to redeem to-day, *apropos* of the pathology of that strange and protean disorder hysteria. The two most striking and most constant clinical features of hysterical disorders which affect the nervous system—hysterical paralysis for instance—are first, the remarkable similarity there is between the latter and a corresponding paralysis due to organic disease; and secondly, the suddenness with which the paralysis (or other malady) may appear in a person to all appearance in perfect health, and the equally sudden way in which it may disappear, without rhyme or reason, and without leaving any trace behind it.

The first of these features, the resemblance to organic disease, is often so great that it may give rise to very considerable difficulty in diagnosis. This resemblance, or mimicry as it has been thought to be by some, is so marked that one of the greatest clinical observers of the last century, Sir James Paget,[2] suggested that the prefix "neuromimetic" should be used for these cases instead of hysterical—e.g., neuromimetic paralysis, neuromimetic joint-disease, and so on. That these affections should be due to mimicry is not an idea which can for one moment be maintained, and I hardly think that Sir James Paget could have intended to use this adjective in the strictly etymological sense. It would endow the patient with a very vast and accurate anatomical knowledge and an infinitude of cunning. There is, in short, only one tenable explanation—viz., that the *same anatomical part* of the nervous system is the seat of some kind of damage, some lesion which is sudden in its onset and equally sudden in its disappearance.

It was the second of these features which led me to what I believe to be the true nature of the lesion. The sudden onset of paralysis always suggests a vascular lesion, and in point of fact the anatomical change is, in my view, a vascular one (at least so far as concerns the manifestations due to lesions of the central nervous system; as regards other hysterical disorders I shall have more to say by and by), a sudden dilatation or contraction, as the case may be, of the arterioles of a given area, accompanied in some instances by exudation, or, at any rate, disturbance of nutrition in that part of the nervous system the function of which is deranged. Just as subjects of the hysterical diathesis are liable to attacks of flushing or pallor of the skin, so also, in my belief, are they liable to attacks of flushing or pallor of various parts of the interior of the body.

To establish the truth of a proposition like this, the ordinary experimental methods of the laboratory are not applicable, for we cannot produce the disease in animals; nor are ordinary anatomical methods available, for patients rarely or never die from the malady. We must therefore have recourse to purely clinical methods, and see how the many and varied phenomena of hysteria tally with this hypothesis, and then employ the method of analogy. I will ask your attention, first, to a case of hysterical syncope presenting some of the data on which my theory is based; secondly, to the evidences of the hysterical diathesis; and thirdly, to the causes of hysteria. We shall then, I hope, be in a position to take a broad general view of the whole subject, and on a future occasion I will ask you to study with me a complete list of hysterical disorders, the features which they present in common, and their explanations. To-day I propose to confine myself to the pathology of hysterical "attacks" or seizures, as exemplified by hysterical syncope.

The patient who will shortly come before you is suffering from an extremely common complaint, but a close scrutiny of her case will, I believe, afford us some most instructive lessons. This young woman is now 22 years of age and she has been subject, ever since puberty, to "fainting attacks" of greater or less severity, sometimes as often as two or three times a week, the frequency depending to some extent on the presence or absence of a determining cause. The attacks are always more frequent and severe about the menstrual period, when they may last for an hour; at other times they may last for only a few moments. The face and limbs become pale, and if we could see it probably the rest of the surface of the body also, and then with a sigh she sinks back, sometimes becoming completely unconscious and sometimes only partially. After a short time the surface again becomes pink and she gradually resumes her normal condition. The process of recovery, she tells us, is often attended by "a rumbling" in the abdomen and sometimes by the eructation of wind. These attacks sometimes come on without *apparent* reason, but they are far oftener determined by some trivial cause, such as an emotional upset or something which startles her. She presents the phenomenon of "ovarian tenderness" in its complete form, which I shall shortly describe to you, and firm pressure in the inguinal region very often produces a fainting attack. She spontaneously informs us that after the attacks she invariably passes a large quantity of almost colourless urine—an occurrence frequently met with in such cases. She has derived much benefit from static electricity, and, for the attacks, assafœtida.

This is a very typical case of hysterical syncope, and I want you to observe that the most interesting clinical features of these "nervous faints," all of which are present in this patient, are as follows. 1. That whereas the great majority of persons never faint, such attacks are liable to occur many times during the lifetime of certain individuals, on more or less provocation. There may be very many years' interval between the attacks, but one of the means of diagnosing the condition is a history of its previous occurrence. In other words, there seems to be an inherent, innate, or inherited quality in some part of the nervous or neuro-vascular system of these persons which does not exist in other people. 2. The sufferers from these attacks are almost always of the female sex. 3. The determining cause of an attack is very frequently of an emotional kind, such as fear, grief, fright, and the like, or some kind of shock. 4. On inquiry, it will generally be found that these same subjects are liable, on the occurrence of the same causes which produce the "faints," to flushes or flush-storms, and perhaps to one or other of the many various forms of hysterical attack which I shall mention shortly, and that these flushes and the other seizures are interchangeable with one another and with the "faints." For instance, another patient now under my care, aged 27 years, is liable at all times to flushings, but the same causes which determine these will, at the catamenial period, result in syncopal attacks. 5. Pallor of the surface marks the initial stage, and lasts during the attack. This is almost certainly due to vaso-motor disturbance—that is to say, a contraction of the surface vessels, which may be primary or secondary to dilatation of the internal vessels, e.g., the arterioles of the splanchnic area. Some suggest that it is due to cardiac failure, but that the other explanation is the more probable, and that the pallor of the surface is secondary to dilatation of the internal vessels, is rendered far more likely by consideration of my next point. 6. Copious urination of pale, highly watery urine follows these syncopal attacks, and this seems to indicate that there has been during the faint a corresponding dilatation of the arterioles of the splanchnic area. This same copious flow of watery urine follows other hysterical seizures, and we have here a very important clue to their pathology. The kidney is extremely sensitive to any alteration in the blood-pressure, as Roy's experiments have shown. The secretion of the watery constituent of the urine, which largely depends on the blood-pressure in the glomeruli, may be increased by (1) any increase in the general blood-pressure such as may be produced by (*a*) increased force of the heart beat, or (*b*) constriction of the arterioles of the skin or

[1] Vide THE LANCET, June 1st, 1901, p. 1513.
[2] Sir James Paget: Clinical Lectures and Essays, edited by Howard J. Marsh. London: Longmans, 1879.

other large vascular area; or (2) relaxation of the renal artery. No wonder, then, that there is a copious secretion of urine, for we know that there is marked constriction of the arterioles of the skin; this we can see, and there are very good reasons for believing that there is a dilatation of the splanchnic arteries which are supplied from the same sympathetic centre as the renal arteries, and therefore the latter are most probably relaxed also. 7. These (and other) attacks are very often preceded (at least according to the report of observant patients) by a curious, indefinable, but extremely disagreeable sensation in the region of "the stomach"; some patients describe it as "a throbbing," a "sinking" or "relaxed feeling" in the abdomen. The same kind of feeling, this patient tells us, may be produced by the emotions of fright, fear, or terror; moreover, very much the same kind of sensation, this patient also spontaneously tells us, may be produced by pressure in the inguinal region and may be then followed by a fainting attack.

It seems to me that sufficient attention is not always paid to the details which I have just mentioned. We now know, thanks to the researches of Dr. Leonard Hill,[3] that the blood-pressure in the cerebral arteries is very largely, if not entirely, regulated by the amount of blood in the splanchnic area, and that the arterioles of this area are capable of an enormous amount of expansion and contraction; indeed, it has been stated that they are capable of containing nearly half of the total blood in the body at one time. If therefore the splanchnic area suddenly dilates cerebral anæmia immediately results, and *vice versâ*. We know also that cerebral anæmia will produce syncope and even convulsions.[4] The inference from the foregoing facts is that the essential lesion of these nervous faints is to be sought in the abdominal sympathetic, and that this lesion, whatever it may be, gives rise to a rapid dilatation of the splanchnic arteries and consequently to cerebral anæmia.

To carry this line of argument a step further, there is very good reason to believe that the pallor of the surface which accompanies the emotion of fear is due to a similar splanchnic dilatation. It seems highly probable, therefore, that the nervous apparatus of the splanchnic area—i.e., the abdominal sympathetic—in these individuals is unduly susceptible and that it is readily influenced by fright, grief, anger, and other emotional causes—emotional conditions, be it observed, which are particularly apt to be met with in hysterical persons and in the female sex.

II.—THE HYSTERICAL DIATHESIS.

The *hysterical diathesis* and the symptoms by which it is recognised next claim our attention. There are two objections to the use of the term "hysteria,"—one is the opprobrium attaching to it and the other is its ambiguity. Its use has been sanctioned by such long-established custom that it cannot be discarded. The term is often applied very loosely either to the inherent tendency—i.e., the diathesis—which may exist in an individual to the development of certain symptoms—paralysis, anæsthesia, syncope, convulsions, joint disease, &c., or else to those symptoms themselves.[5] The hysterical diathesis may, I believe, be defined as a peculiar condition of the nervous system, inherent in the individual and for the most part inherited, consisting in its *psychical* aspect of a want of self-control and emotional instability, and in its *physical* aspect of a tendency throughout life to the development of various sensory, motor, visceral, or neuro-vascular disturbances unconnected with any definite organic lesion discoverable by our present means of investigation. That there is an organic change I firmly believe, and the chief purpose of our studies to-day is to ascertain its probable nature and position.

Older authors used to describe a special expression of face as belonging to subjects of the hysterical diathesis, but I have never found any one type of facies uniformly attaching to the condition. The mental and physical peculiarities, however, are certainly of such a kind that, given adequate opportunity, one may, I believe, recognise them. The leading features of the *hysterical order of mind* are (1) a lack of will-power or persistence of thought and action and (2) an emotional instability. The intellect may be, but it is not necessarily, below par—a fact on which most observers are now agreed; indeed, some of the brightest and most refined intellects in history have been found amongst hysterical women, especially when they have had an incentive (such as dire necessity) to the evolution of sufficient steadiness of purpose and self-control. The will-power, I believe, may sometimes be cultivated by educated women to such an extent as to deceive the physician for a long time, and thus he may even be led to believe that he has to deal with a masculine type of woman. Sooner or later, however, it is generally by the emotional instability that we recognise the diathesis. These patients in ordinary circumstances are easily roused to violent expressions of feeling, to hasty judgments, to impulsive actions, and to passionate exhibitions of various kinds. One moment they are angry (or pleased) because a thing is going to be done; the next moment they are cross (or pleased) because it has not been done. I do not believe that the emotions are necessarily in excess, but these, like the centre controlling the splanchnic area in our patient, are unstable and hyper-sensitive. Little things affect these people because of this instability. And this leads me to refer to a subject on which I believe there is sometimes a grievous misunderstanding. I can find no real grounds for believing that the sexual desire in hysterical females is either more or less than in other persons, but the fact is this, that their normal desires are not under normal control and thus they may be led sometimes to an excess or deficiency of modesty in their demeanour. The unrestrained and ill-regulated sexual emotions of these subjects lead them sometimes to assume a bearing in the presence of the other sex which has, unfortunately, led many otherwise discriminating physicians to assume, not only that excessive sexual desire is a symptom of the diathesis, but that the gratification of it will lead to its cure. Never, I believe, was there a greater mistake. I shall have to refer to this subject again, and we must now pass to the physical evidences of the diathesis which more immediately concerns us now.

Three *physical peculiarities* have I found to be very constantly associated with the hysterical diathesis. Firstly, there is a marked tendency to "flushing," with very little, and sometimes apparently without any, provocation. These flushes occur in parts that are exposed, like the face and neck, and also in parts that are unexposed. Sometimes they take the form of an erythema or even an urticaria, usually very transient, sometimes more enduring. I have several patients now under treatment who can from time to time show me "red marks," as they call them (small localised patches of congestion), which come out "when they are nervous." They are extremely fugitive and are, I find, hardly known among physicians; indeed, the patients themselves very often overlook them for they give rise to no inconvenience unless, as in four or five cases which I have seen at the Hospital for Diseases of the Skin, they come on the face or neck, when they seek advice. For the "blushings," "flushings," and "flush-storms," to which these subjects are so liable, I would refer you to the excellent description and analysis by my colleague, Dr. Harry Campbell,[6] though they have been often observed by others,[7] and I need not dwell further upon them, except to remark that they indicate once more an instability of the various vaso-motor reflex centres.

Secondly, in a large proportion of these people the superficial and deep reflexes are slightly, though perceptibly, increased. As to the superficial reflexes it is a notorious fact that these subjects are what is called "very ticklish"—i.e., their superficial reflexes are hyper-sensitive. It is also a fact, though not so well known, that their patellar and other tendon reflexes are unduly marked. I have often called your attention to very marked instances of this.

Thirdly, there is, about all their vital phenomena, whether healthy or morbid, a variable or paroxysmal character, a

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[3] The Physiology and Pathology of the Cerebral Circulation. London: Churchill, 1896.

[4] Kussmaul: New Sydenham's Society's publications, vol. v., 1859.

[5] The Greek word *διάθεσις* means a disposition or tendency, and the rheumatic, scrofulous, hæmorrhagic, or calculous diatheses severally indicate a tendency to the development of rheumatism, tubercle, hæmorrhage, or stone. These are strictly comparable to the hysterical diathesis, and one might just as well talk of tuberculous peritonitis being an attack of "struma" as to speak of hysterical syncope or convulsions being an attack of hysteria. It is too vague.

[6] "Flushing and Morbid Blushing." London, 1890.

[7] Sir James Paget remarks, "The distribution of blood is, in many of the mimic cases, greatly affected. Heat and cold of the same part, rapidly succeeding one another, flushing and pallor, turgidity and collapse—all of these are frequent, striking, and capricious in the nervous mimicries."—THE LANCET, Oct. 11th, 1873, p. 512.

change from day to day, which seems quite peculiar to them. I must not dwell longer upon them, but these are the chief characteristics of the hysterical diathesis or temperament. Individually these qualities may not be very distinctive, but collectively—the deficient will-power, the emotional instability, the ready flushing, the excitable reflexes, and the variability of the vital phenomena—they are so far distinctive as to enable a careful observer to recognise the condition readily enough in the female sex. They may become more marked at one time than another, especially when the patient is out of health and particularly at the evolution and involution of a woman's sexual life, but I will ask you to notice that these symptoms or characteristics exist as innate qualities throughout the life of the individual who is the subject of the diathesis.

Sooner or later, however, generally before the age of 25 or 30 years,[8] a large proportion of these subjects exhibit some more decisive manifestation in the shape of an *hysterical disorder*. Of these there are, as we shall see, an infinite variety, but there are some which are of such common occurrence in hysterical individuals that they are sometimes spoken of as hysterical stigmata, though this name ought more properly to be reserved for the five characteristics which I have just described. Certainly the most frequent of these is some kind of "nervous attack" (*"attaques des nerfs,"* as they are termed in France). These may consist of syncope, as in our patient, or "emotional attacks" of crying or laughter without adequate cause ("hysterics"), or any of the other kinds to be mentioned shortly. Sometimes they occur, to all appearances, spontaneously; but more often they are determined by some emotional upset; and they may in many instances be determined by pressure on the inguinal region. Perhaps the next most frequent hysterical disorder is hemi-anæsthesia, or some other perversion of sensation; or patches of anæsthesia, the existence of which may be unknown to the patient until medical examination reveals it. Thus we have discovered for the first time that our patient has several patches of anæsthesia on the legs. All the other physical manifestations, and so far as can be judged the mental peculiarities, are also present in this young woman. The hysterical diathesis is strongly marked in her.

III.—CAUSES OF HYSTERIA.

Let us now turn to the *etiology of hysteria*. This patient is a typical example in this respect also. Her paternal grandmother was "hysterical," and though her mother was said to have been free from any neurosis, both her parents were addicted to alcohol. I want to draw a well-marked distinction between the *predisposing* causes, the *contributory* or exciting causes, and the causes which may *determine* an attack. The predisposing causes are practically only two in number, Sex and Heredity. The far greater liability of the female sex is so well known and admitted that this need not detain us. Out of 336 cases which I have collected only 26 were males. But what I want to emphasise is that the hysterical diathesis is essentially something that is inherited or inherent in the individual, and that without it both exciting and determining causes are, in all ordinary circumstances, unable to act. This has been insisted on by many of the ablest observers such as Guinon, Charcot, and Briquet.[9] There are three ways in which heredity may come into operation. First, there may be a *direct* inheritance of the hysterical diathesis, and one or more of the children of an hysterical mother or grandmother—the influence is far more potent on the mother's side—are almost sure to be hysterical themselves. I have shown you many instances of this. Quite as frequently, however, there is an *indirect* hereditary influence in the shape of a general neuropathy. This is particularly the case when insanity is present in the family history—a fact which shows once more the close relationship between hysteria and mental disorder. Finally, and this is a point which has not, so far as I am aware, been sufficiently insisted upon,[10] alcoholic parents, whose family may be free from any kind of neuropathic taint, will often propagate children afflicted with the hysterical diathesis. Our patient, therefore, derives the hysterical diathesis from the first and third of these sources.

As regards age, undoubtedly puberty and the climacteric offer a predisposition, and our patient's troubles date from the former.

Among the contributory or exciting causes are many conditions which lower the mental or bodily strength, the will-power, or the emotional stability. Continuous emotional strain such as grief, repeated attempts at hypnotisation, infectious or exhausting maladies, hæmorrhages and similar conditions leading to general debility, physical or mental overwork, venereal excess, anæmia, plumbism, mercurialism, alcoholism, syphilis, pregnancy, parturition, organic diseases of the nervous system are some of the causes which I have found in operation and which are capable of exciting an outbreak of some kind of hysterical disorder. But as Guinon[11] truly points out these are only contributing causes and are only capable, under ordinary circumstances, of acting "in a person predisposed by heredity and sex."

The question whether celibacy and unsatisfied sexual desire are contributory causes of hysteria is an important one, but it is not easy to settle absolutely. Personally, I cannot find anything in support of this view, and I have just now mentioned what I believe to be the true explanation of the immodest bearing sometimes observed in hysterical females—namely, that their emotions and desires, though normal in amount, are not under normal self-control. Nevertheless, there are some observers who argue from this and other circumstances that celibacy and sexual continence are potent causes both of the hysterical diathesis and of hysterical disorders. It is true that matrimony sometimes leads to a temporary disappearance of certain hysterical symptoms, but this is readily explained by the fact that the patient has newer and wider interests which take her out of herself; moreover, removal from the surroundings under which a hysterical disorder arose will often of itself lead to recovery, as I have shown you in several instances. Some years ago I collected statistics which show that the incidence of hysterical phenomena was very nearly the same among married and unmarried females of the same age-periods other things being equal. These data also revealed the fact that many happily married women are attacked by hysterical disorders quite as grave as their unmarried sisters. I may also refer to the researches of Briquet in this matter which did not come to my notice until after I had independently arrived at the same conclusions. He found on inquiry that hysteria was not more common in those religious sisterhoods where the law of celibacy was followed than amongst communities where celibacy was not observed. An exhaustive inquiry into three large social classes—religious sisterhoods, domestic servants, and prostitutes—led him to the undoubted conclusion that "continence is not a cause of hysteria."[12]

The conditions of a person's environment undoubtedly influence the occurrence of hysterical manifestations and are capable of greatly promoting their cure when they have appeared. This is only what one would expect in a disease so much dependent on emotional states; and a condition of affluence in which a young woman has no interest in life beyond her own health undoubtedly fosters, but it does not produce, hysteria.

Education, therefore, and social position no doubt count for something in the causation of hysteria, but not as much as one would think. When I first went to the Paddington Infirmary I expected to be deprived of the field which the better classes of hospital practice afforded, but it was not so. I found that hysteria was very nearly as rife among the poor and destitute as among the wage-earners and the affluent. I have been at some considerable pains to ascertain the relative incidence, because it is rather a favourite dictum with some that hysteria is entirely the outcome of a lazy, self-indulgent life. Supposing we divide a community into three classes: (1) those in easy circumstances, not obliged to work; (2) those who work for their living; and (3) those who are destitute. The first might be represented by private practice, the second by hospital patients, and the third by workhouse infirmary patients. I collected without selection 1000 patients from each class, and found that the proportion of hysterical complaints among the first class was 67 per 1000, among the second it was 53 per 1000, while among the third it was 60 per 1000. However, I am inclined to think that faulty education combined with an absence of any necessity to earn their daily bread may act as contributory factors, and also

[8] Briquet says that hysterical disorders *always* appear for the first time before the age of 30.—Traité de l'Hystérie, Clinique et Thérapeutique. Paris: 1859.

[9] Guinon: Agents-Provocateurs de l'Hystérie; Charcot: Leçons sur les Maladies du Système Nerveux; Briquet: Loc. cit.

[10] Charcot, however, frequently refers to the powerful part which alcoholism plays in the production of general neuropathic heredity.

[11] Guinon: Loc. cit. [12] Briquet: Loc. cit.

afford the patient abundant opportunity to pay attention to the more trivial ailments which would swell the category of hysteria. These factors would tend to increase the number of cases in Class 1. On the other hand, alcoholism in the parents would tend to increase the numbers in Classes 2 and 3, so that these two considerations would tend to balance each other. It is very difficult, if not impossible, to obtain statistics on these matters which shall be free from fallacy.

Before concluding the subject of exciting or contributory causes of hysteria I should like, in passing, to mention a fact but little known which was first revealed by that painstaking observer Briquet, whom I have already quoted. A most exhaustive inquiry into the family histories of hysterical and non-hysterical mothers lead him to the conclusion (p. 527) that "infants, born of hysterical mothers, present a much greater fatality and die at a much younger age than those who are born of non-hysterical mothers." Possibly the former do not know how to take care of their children so well as the latter. But whatever the explanation may be, hysteria, being so largely an hereditary complaint, ought in the course of many generations to die out from amongst us. In point of fact, if one can rely on ancient records[13] the cases which are met with in the present day are in general terms less severe than formerly. We have no means of ascertaining exact facts as to frequency, but I fear that alcoholism in the parents, being such a perennial source, would counterbalance any diminution of the disease in the process of evolution.

It now only remains for us to consider the third group of causes—namely, those which actually *determine* a paroxysm or attack of some hysterical symptom—severe enough, perhaps, while they last, but usually transient, such as syncope, catalepsy, convulsions, somnolence, &c. The manifold ways in which this may be brought about are doubtless so familiar to you that I need not dwell upon them. Practically these can nearly always be traced to some emotional disturbance or instability. Some of you may remember the case of the woman whose symptoms dated from a cataleptic seizure which supervened after going to the theatre to see a performance of "The Sign of the Cross." I have shown you from time to time many illustrations of how anger, grief, fear, joy, traumatism (i.e., fright), &c., may act in this way. But this cause, like the last group, is powerless unless a predisposition (i.e., the diathesis) exists. Moreover, the degree of emotional disturbance necessary to produce an attack varies inversely with the degree of the predisposition present in the patient. In the patient whom you have just seen the predisposition is fairly marked, and when to this is added the exciting condition of the menstrual period the determining cause necessary was so slight that it would escape notice and the "faints" appeared to come on almost spontaneously. In one of the patients I saw in the late Professor Charcot's clinique in 1888, the slamming of a door was sufficient to determine a cataleptic seizure; and the patient, a girl, 17 years of age, would remain rigidly fixed in whatever position she happened to be at that moment, until someone who knew the secret came and pressed on one of her numerous hysterogenic zones and released her from her uncomfortable position.

IV.—PATHOLOGY OF THE HYSTEROGENIC PHENOMENON.

There is still one determining cause of these attacks which deserves our very careful consideration. Hysterical attacks differ from all other kinds of seizure in one very remarkable way—viz., that they can be produced in a large number of instances at will by pressing firmly and steadily on some part of the patient's body, usually the inguinal region. In our patient you have seen that pressure on the inguinal region on either side produced either a complete syncopal attack or the same disagreeable sensations which formed its initial stage, and which are collectively known as the "aura." It produces, she says, a feeling of "painful suffocation" or the "sinking in the stomach like you get on the switchback railway, only worse." This sensation then rapidly rises up from the groin and the abdomen towards the chest and throat and terminates in the feeling as of a ball in the throat (globus hystericus). Sometimes the bystanders can hear the patient make a gurgling attempt to swallow "the ball." In other subjects pressure in this region produces sighing and a feeling of "faintness and sinking in the abdomen." The series of sensations so produced is generally called in England "ovarian tenderness," but nothing could be more misleading. It has not the slightest resemblance to the tenderness which you or I feel when pressure is exerted in this region. It is best to call it as the French do, the "*ovarie*," or better, perhaps, the "inguinal or hysterogenic phenomenon," for it may exist, as I have shown you, in a very complete form in hysterical males. It only exists, in my experience, when the patient is, or has been, the subject of some form of hysterical attack. It may thus terminate in rigidity of the limbs (one man whom I showed you assumed the position of opisthotonos), or tremor, catalepsy, or convulsions, local or general. The points, pressure upon which will produce the sensations just described, are called in France "hysterogenic zones," and though the inguinal region is the most frequent, the submammary region is another situation, and altogether there may be, in some cases, a score of hysterogenic zones, in different parts of the trunk; never on the limbs.[14] In some patients in whom a number of such zones exist pressure upon one of them will produce an attack, while pressure upon another point, or a second pressure upon the same point, will stop it. Some of you will remember my showing you a young woman (a patient under the care of my colleague Dr. T. Outterson Wood) in whom pressure on the submammary region produced a violent attack of clonic spasms of the head and neck, while pressure on the ovarian region stopped them—a fact of which the patient and her friends were not slow to avail themselves, for these spasms when unchecked were of great violence and caused the perspiration to drip from her forehead.

Gentlemen, if these phenomena have anything to do with the ovary, how is it that they occur in the male, for undoubtedly they do, and in a very marked manner? Nor are they connected with the testicle apparently, for in male hysterical subjects this organ is only very occasionally the seat of "ovarian tenderness," and then in all the cases I have seen *this organ has been undescended*. By far the commonest position of hysterogenic zone in male patients is the inguinal region, the region which is supplied by the ilio-hypogastric (and sometimes, less or more in different subjects, by the ilio-inguinal) nerve. This nerve is entirely cutaneous or centripetal. It starts from the skin over the buttock and the skin in the inguinal region, and passing into the abdominal cavity it joins the first lumbar nerve-trunk, where it comes into very intimate relation with the solar plexus, the largest mass of sympathetic ganglia and fibres, not only in the abdomen, but in the body.

We have seen good reasons for believing that attacks such as those in this patient are due to the sudden dilatation of the abdominal vessels, and if this line of reasoning be correct we can now understand how it is that pressure in the inguinal region may produce the aura and all the succeeding phenomena of an attack. The ilio-hypogastric nerve is apparently the centripetal depressor nerve of the abdominal sympathetic, and irritation of it by pressure in this region produces dilatation of the splanchnic area and consequently cerebral anæmia. There may, apparently, be other depressor nerves in patients who present other hysterogenic zones.

This explains many of the strange and apparently inconsistent features of these and other hysterical attacks, if we look upon the splanchnic area as the point whence they start. And thus we see that the abdominal sympathetic may be influenced (*a*) through the ilio-hypogastric nerve (or the nerve from some other hysterogenic zone) or (*b*) through the brain by some emotional influence. There is nothing new or strange in the emotions influencing the sympathetic nerves. Does not the sight of food induce secretion of gastric juice? I shall submit further proofs at our next meeting. Moreover, we can now understand how it is that these attacks can be produced, or at any rate, aggravated, by (*c*) flatulent distension of the bowel—i.e., by irritation of other centripetal branches of the abdominal sympathetic. Have you not often heard the patient's friends remark: "Directly she brings up the wind she gets better" (it was so in the case before you), and that is, no doubt, why anti-spasmodic remedies such as assafœtida, valerian, or even peppermint, will often give speedy relief. There are no doubt other centripetal tracts, but I must defer these until our next meeting.

[13] See numerous contributions by Dr. Henri Miege in the Nouvelle Iconographie de la Salpêtrière; and also a separate work by Professor Charcot, "Les Démoniaques dans l'Art."

[14] In very rare instances they may occur on the upper or lower extremities. Thus M. Gaube (Recherches sur les Zones Hystérogènes, Thèse de Bordeaux, 1882) mentions a case of that kind.

SOME FURTHER CASES OF ETHYL CHLORIDE NARCOSIS.

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THERE was recently published in THE LANCET[1] a paper in which I gave short notes of some cases of ethyl chloride narcosis and I am now recounting my experience of some more cases in the hope that it may be a help to others who wish to make trial of ethyl chloride as a general anæsthetic. One case is of interest because the patient died about an hour after the administration; another case because of the development of a rash (which I had not previously seen described as following the use of the drug) during anæsthesia; and yet another case because the accompanying muscular excitement made full anæsthesia and operation impossible. The longest operative anæsthesia lasted for from 16 to 17 minutes and the result in every way was excellent, although, according to her medical attendant, the patient had had very serious symptoms when he had once before given her chloroform. The administrations for removal of tonsils and adenoids in many of the selected cases gave excellent results. A study of the subjoined list of cases, both successes and failures, will best give an idea of the possibilities of ethyl chloride.

CASE 1. *Operation for abscess of the leg, scraping, &c.*—The patient was a boy, six years old. He was pale but had no cough. The chest was not examined. The patient was prepared for operation and took about one minute to go under anæsthesia. The reflex was not lost. As the Breuer's inhaler, which was used, was too large, it was difficult to keep level anæsthesia and as I gave too little of the drug the patient at intervals cried and moved. His respiration, when properly under anæsthesia, was regular. His colour was always good and his pupils were of moderate size. There were no after-effects and the patient remembered nothing. The operative anæsthesia was five minutes. The lad awoke too soon to consciousness of pain; if he had had chloroform or ether he might have slept all night instead of crying during most of it.

CASE 2. *Amputation of the finger.*—The patient was a girl, six years of age, a bonny, rosy child. The chest was not examined. She was prepared for operation and the course of the anæsthesia was much the same as in Case 1. The patient only phonated two or three times during the operation. There was a moderate amount of mucus; the colour was heightened throughout. The child made a perfect recovery and remembered nothing afterwards. The induction of anæsthesia took one and a half minutes. The operative anæsthesia was over five minutes. The patient was quite well afterwards, and ate a good meal in half an hour after the operation.

CASE 3. *Suppurating bursa patellæ.*—The patient was a woman, aged 35 years. The case was of an ordinary type. The chest examination revealed nothing. She was prepared for operation and was under anæsthesia in two minutes. She had a very good colour throughout, but there was slight phonation at times. There was nearly always a brisk reflex; this was only once abolished. There was always very slight rigidity which was not, however, inconvenient. When phonating the pulse was rather quick, otherwise it was about normal. Respiration was always good and vigorous. The pupils were moderately or well contracted. When the dressings were being applied the patient cried out that she was being hurt, but she afterwards declared that she felt and remembered nothing. Recovery took place in less than one minute. The operative anæsthesia was fully four and a half minutes. From eight to 10 cubic centimetres were used in three or four doses. This was a very satisfactory case. The patient had pleasant and peculiar dreams which she would not tell.

CASE 4. *Perineal abscess.*—The patient was a strong man, aged 28 years. He was prepared for an anæsthetic. He was put in the lithotomy position and went under anæsthesia quietly. In two minutes the conjunctival reflex was very dull and the operation was begun. There was a very slight, but not inconvenient, rigidity, with little movement of the legs. The breathing was regular and vigorous, the colour was good, and the pupils were moderately or well contracted throughout. Altogether 14 or 15 cubic centimetres were used in three or four doses. Rapid recovery ensued in less than one minute. There were no after-effects, the patient talking as he was being wheeled away. He was very pleased with the effects of the "gas," as he called it. The operative anæsthesia was about four and a half minutes. There was a large remainder of ethyl chloride on the inhaler.

CASE 5. *Exploring a lump in the axilla.*—The patient was a youth, aged 15 years, who showed a good deal of malaise but was otherwise healthy and sturdy. He was placed in bed and there was no preparation for the anæsthetic. Five cubic centimetres were poured on for the first dose. The patient breathed quietly and deeply and was under anæsthesia in one minute. The reflex was very much dulled when the incision was made and there was no movement. The pupils were well contracted and there were heightened colour and vigorous respiration throughout, also slight conjunctival reflex. The operative anæsthesia was over in four minutes. There was perfect recovery; in less than one minute the patient was talking rationally. He was sick once about an hour afterwards; this was probably due to malaise.

CASE 6. *Scraping gland and skin of the neck.*—The patient was a boy, aged six years, quiet and ill-developed. The chest was not examined. He was prepared for operation. There was quiet induction in less than one minute. There was just the slightest movement on first scraping, but none after. The reflex was just abolished once. The pupils were always of moderate size; the colour was rather flushed. There were perfect anæsthesia and rapid recovery with vomiting of half an ounce of yellow bilious fluid. The boy was conscious in less than one minute and he gladly accepted a small coin. There were no after-effects, but he was very soon hungry. The operative anæsthesia was just three minutes. After the operation had commenced a patchy and erythematous rash was found on the upper part of the chest and the arms, especially on the left side, one or two of the patches being as large as the palm of the hand. The rash disappeared in three minutes after the boy's return to the ward, altogether lasting about 10 minutes. There was no rash before the operation and there was nothing to distinguish this erythema from that sometimes occurring during etherisation.

CASE 7. *Circumcision.*—The patient was a boy, aged 11 years. Some degree of paraplegia and ataxia were present. The boy was ill-developed; his chest was not examined. The patient was prepared for operation as usual. At first he cried a little, then he breathed quietly and was anæsthetic—i.e., the limbs were relaxed and the conjunctival reflex was dulled—in about one minute. Section of the prepuce caused no reaction. About a minute later I allowed him to recover too brisk a reflex and he began to move his arms and legs and phonated very slightly. The operation was uninterrupted and movement soon stopped. Thereafter I kept up a deeper and an even narcosis, the lid-reflex being quite or nearly abolished. The colour was heightened throughout. The pupils were always well contracted. I did not myself feel the pulse, but the house physician who stood by said that it was of good volume though low in tension. To relieve the patient of the pain which would otherwise have been caused by the nature of the dressing, which was gauze and collodion, I kept up the administration until the dressings had been applied. In about half a minute from the removal of the mask he began to retch and to vomit, becoming a little blue. After, however, bringing up some bilious fluid and mucus he regained consciousness. Later, he felt a little sick for about an hour; his chief complaint was the wound pain. The operative narcosis lasted from 10 to 11 minutes.

CASE 8. *Extensive cellulitis of the hand, extending to the wrist-joint.*—The patient, a woman, aged 60 years, had had, I was told, chloroform some time before with very serious complications during administration. She was a spare woman, but her general condition was fair. There was no cough. She was very nervous and had been prepared for operation. There was nothing special in the chest. She took the anæsthetic very well, breathing regularly and quietly, and there was no excitement. She was under anæsthesia in two minutes, the dressings being removed after the first minute. There was slight but not inconvenient movement of the limbs at first, which was easily restrained by the nurse. After three minutes' exploration and incisions there were slight movements of the legs and phonation, the latter recurring two or three times during the operation and

[1] THE LANCET, March 9th, 1901, p. 698.

disappearing with more of the drug. The head was easily kept on one side. There was no mucus. The patient's general condition all through the operation was excellent—in fact, there appeared to be a distinct degree of stimulation. The breathing was regular and rather rapid, and on an average 45 to the minute. The pulse was regular and full and rather more rapid than before the administration, and was certainly of better quality. The colour of the face, the lips, and the ears, and the vascular reflex thereof were excellent. Generally during the administration there was strong contraction of the muscles closing the eyes, which it would have needed a good deal more, and an unnecessary amount, of the drug to abolish. The pupils were of moderate size or well contracted. A deeper degree of anæsthesia, though characterised generally as above, caused, in addition, full muscular relaxation and deeper breathing. Administration was only stopped when all the dressings had been applied. The patient quietly came round in about two minutes, being in an analgetic, sleep-like state during the recovery. There was no after-effect whatsoever. The patient had a good meal of milk one and a quarter hours after the operation and enjoyed it. The operative anæsthesia lasted for from 16 to 17 minutes. The quantity of ethyl chloride used was 35 cubic centimetres given in small doses of from three to five cubic centimetres; probably about 30 cubic centimetres were inhaled, some being left over on the gauze. In other circumstances I should have given gas and oxygen to this patient. Though she had had chloroform some time ago, and had, according to her medical attendant, been in serious danger therefrom, ethyl chloride had a favourable influence. Her general condition during administration somewhat reminded me of that which exists under the A.C.E. mixture except for the absence of mucus and presence of reflexes and slight rigidity, in that the drug appeared to have a somewhat stimulating effect. If in cases like these ethyl chloride can be relied on it would appear better to fill the gap occupied by gas and oxygen than this mixture itself, as the apparatus which is needed is so simple and portable, while there is not the difficulty of supplying oxygen artificially. I should have had no hesitation in prolonging the administration for half an hour or so had it been necessary.

CASE 9. *Internal urethrotomy and sounding, &c.*—The patient was a man, aged 37 years, spare and excessively nervous; he had the staring eyes and facies of a man in a terrible fright. He had been a hard spirit-drinker for several years and had not been sober for months before his admission into the hospital. He was in an extremely bad general condition. He had had hæmaturia shortly before and then had retention of urine. On the previous night one of the house surgeons tried to give him gas, but could not put him under anæsthesia, as he struggled and fought, and nothing was done. His pupils were large. Nothing special was found in front of the chest. His complexion was earthy, his pulse was weak and quick, and there was pus in the urine. Serious kidney lesion was diagnosed. The administration was begun in the anæsthetic room. The patient took the anæsthetic fairly quietly, and in two minutes, while he still had a reflex, he was wheeled into the operating room and placed on the table. At the fourth minute an attempt was made to introduce the catheter but he moved his legs too much; this, however, was easily restrained by the nurse, and in another minute the operation proceeded and the patient's movements became less. There were vigorous respiration, improved colour, strong conjunctival reflex, moderate-sized pupils, and fair pulse throughout, the drug appearing to act as a stimulant. Full recovery occurred in from one minute to one and a half minutes, the patient appearing at first dazed and excited. The operative anæsthesia was seven minutes. A few cubic centimetres were administered at a time and the gauze was kept constantly frozen. Anæsthesia, though light, was perfect and I should have had no hesitation in continuing the administration for a much longer time if necessary. About 20 cubic centimetres were used. On his return to the ward the patient was quite conscious and rational, complaining of nothing but pain on micturition. He would not eat his full dinner but took a fair quantity of milk half an hour after the operation. The pulse was frequently felt by the nurse after the operation, though no danger or trouble was anticipated; it was, she said, of fair quality and never more than 90 or 94. The colour was as good as before the operation. The patient lay quietly all the time recumbent in bed. His bowels were moved four times, a little blood appearing in one stool, probably from the urethra. He had one slight but distinct rigor. During the last motion he was calling out with pain, and when in a minute or two the nurse went to him he was dead. This happened about one and a quarter hours after his return to the ward. A post-mortem examination was made on March 30th by Dr. J. G. Emanuel, pathologist to the General Hospital. The diagnosis was meatal stricture, consecutive nephritis, adhesive peritonitis, pericarditis, pleuritis, and fatty liver. The body was well developed and well nourished. Rigor mortis was present. The heart weighed 11½ ounces. The pericardial cavity was quite obliterated. The layers were closely adherent but separable by manipulation; there was no thickening of either layer and no hypertrophy of the heart. There were a little dilatation of the left ventricle and a few sub-pericardial and sub-endothelial ecchymoses; the cardiac muscle was fairly firm. The right lung weighed 20 ounces and the left 17 ounces. There were a few old adhesions in each pleural cavity. Both lungs were crepitant. The peritoneum was the seat of chronic adhesive peritonitis throughout. There was no ascites; all the coils of the intestines were glued together in much the same way as the pericardium. The peritoneum over the liver, the spleen, and the bladder was in the same condition. There were no enlarged mesenteric glands. The appendix was healthy and there were no signs of tubercle. The liver weighed 68 ounces; it was large, soft, and fatty. The pancreas was healthy. The right kidney weighed eight ounces and the left 11 ounces, the right kidney being large and healthy and the left very large and markedly congested, containing in the cortex and medulla three or four small (pinhead) pyæmic abscesses. The capsules stripped easily. There was no diminution of cortex and the texture was generally normal in both organs. The bladder was dilated, there were chronic cystitis and a few sub-mucous ecchymoses. The urethra was the seat of a long fibrous stricture situated in the body of the organ. The suprarenals were healthy. The spleen was large, diffluent, and septic-looking. The brain was normal; it weighed 47 ounces. Death in this case was probably not due to ethyl chloride for the following reasons: 1. Because all of the very volatile drug had been eliminated an hour before death as was shown by the rapid and perfect recovery, absence of other after-effects, and capacity to take food. 2. Because death could be more easily explained by the bad condition of the heart and other organs, affected secondarily, perhaps, by the straining and rigor. Death occurred evidently from heart failure. 3. If death was due to ethyl chloride the patient would more likely have died during administration or recovery from it. I should not have cared to have administered chloroform and the other alternative anæsthetic would have been ether. Seitz records a case of syncope during recovery—i.e., while the drug was still in the lungs and circulation. Besides a death recorded by Lotheissen as having occurred during administration in a bad subject, another one is reported by Zeitz[1] of Zürich as happening 16 hours after operation to a patient in bad condition and who had kyphoscoliosis. Two grammes of ethyl chloride had been used for a tooth extraction and immediately afterwards respiration stopped. The patient temporarily recovered after the application of resuscitative measures but died later as related.

CASE 10. *Opening and scraping of an abscess of the foot.*—The patient was a stout, rosy-cheeked girl, aged six years. She was prepared for operation. She had a little cough. The nasal airway was obstructed and the mouth was open; the patient probably had adenoids. An examination of the chest revealed nothing. The administration was begun with one or two cubic centimetres at a time; there was no trouble. After one minute the cleaning operation was begun, causing only a little leg movement and slight phonation. The conjunctival reflex was brisk, the colour was good, and the respiration was regular. A little more of the drug abolished rigidity, though there was still brisk reflex, as was, indeed, the case all through the operation, during which narcosis was perfect. The pupils were of moderate size. The child's condition looked a perfectly normal one. After stopping the administration consciousness returned as from sleep in less than a minute. The operative anæsthesia was four minutes. There were no after-effects at all.

CASE 11. *Adenoids.*—The patient was a girl, aged 14 years. She was purely a mouth-breather, pale, and nervous. She was placed in a recumbent position with the head horizontal and a small prop in the mouth. Five cubic centimetres were

[1] Correspondenzblatt für Schweizer Aerzte, 31. Jahrgang, No. 4.

sprayed on and soon another five cubic centimetres before operation. The child breathed well; after about half a minute the respiration became regular and the colour much improved; she coughed twice. The reflex was always briskly present, the pupils were of moderate size, the eyelids were tightly closed, and there was slight muscular rigidity. After about two minutes the mask was removed and the operation was performed. The patient coughed a little. She was of good colour throughout and at the end was apparently in an analgetic condition. Extremely little blood was lost and there was no congestion of the parts. Recovery of consciousness was rapid. The anæsthesia lasted about three-quarters of a minute or one minute—i.e., longer than with nitrous oxide. In about 10 minutes the patient, who was perspiring a good deal, had a flushed colour and a good pulse, walked upstairs. Afterwards she vomited some blood and felt drowsy till the afternoon. Ten cubic centimetres were used and probably about seven cubic centimetres were inhaled. The operator was very pleased with the result.

CASE 12. *Opening and scraping a sinus, &c., in the forearm.*—The patient was a thin and wiry man, about 40 years of age, of sandy colour, and very abstemious and cheerful. His chest was not examined. He was placed in a semi-recumbent position on a couch and took quietly five cubic centimetres in two doses. Operation was then attempted in about two minutes, when brisk reflex and slight rigidity were present. Then movements of the arm and leg occurred, becoming rapidly more extensive and awkward; also much phonation and excitement. Endeavours to push the anæsthetic caused much greater muscular twisting movement and writhing of the body so that the patient would have rolled off the couch if he had not been restrained. The pupils at this stage were of moderate size and the eyeballs were a little prominent. The colour was heightened. On stopping the administration the condition gradually passed off. Before the patient quite knew where he was I again began to administer ethyl chloride, but the same phenomena appeared, and yet again at the third attempt, when the patient rolled off on to the floor. The more the drug was pressed the more unmanageable the patient became, so that operation was impossible. Then I changed to chloroform, thinking that probably he would show too much excitement for me to give him gas and ether conveniently. In a minute or two he began to move and to twist awkwardly about, but then quickly passed into a condition of incoherent volubility lasting for from three to four minutes, during which the operation was finished. He very quickly recovered and was none the worse. He felt nothing of the operation at all and only remembered vaguely a sentence uttered during his going off and seemed very satisfied with the result. Thus, in this case, ethyl chloride beyond a very early analgesic stage caused excitement and irregular muscular contortive action, rendering administration impossible. There was no opisthotonos, which is said to be commonly associated with excitement. 20 cubic centimetres were used of which much was not inhaled.

CASE 13. *Adenoids.*—The patient was a tall, well-built, rather pale female, aged 18 or 19 years. She was placed in a recumbent position, with a prop in her mouth. About five cubic centimetres were sprayed on and the patient, being very nervous at first, breathed irregularly and lightly. In about half a minute she began to cry and to struggle violently, but being restrained she took about half a dozen deep breaths and then quickly became relaxed and flushed, breathed deeply and regularly, and in a few more breaths lost the conjunctival reflex, the pupils being of moderate size. After three or four more breaths Mason's gag was inserted and operation was leisurely done during an anæsthesia which was perfect and which lasted double the length of time that was needed—i.e., from one and a half to two minutes. Recovery was quick, the patient complaining afterwards of nothing but sore-throat. There was no sickness in the operating theatre. The improvement and flush of colour continued not only during the operation and recovery but also when the patient walked from the theatre eight or 10 minutes afterwards. There were no special after-effects of any kind and the patient went home in five and a half hours. The operator was extremely pleased with the long anæsthesia, the slight loss of blood, and the absence of congestion.

CASE 14. *Adenoids.*—The patient, a girl, aged 13 years, was of the ordinary type. She had a high and narrow palate. A mouth-prop was inserted, when she breathed quietly but not deeply though regularly. She had very good colour all through. After from one minute to one and a half minutes, the pupils being contracted and the lid-reflex being present, the operation was begun. The prop was removed and Mason's gag was put in, and after about 20 seconds the patient began to move, and then during the rest of the operation she struggled violently. Analgesia lasted about one minute. The girl had no recollection of the operation. In about 10 minutes she walked back to bed. It was originally proposed to give this patient nitrous oxide. Seven cubic centimetres were used. There were no after-effects attributable to the anæsthetic.

CASE 15. *Deflected nasal septum, adenoids, and tonsils.*—The patient, a boy, aged 11 years, was of the ordinary type of child who has adenoid growths with a good colour and a narrow chest. He was placed in a recumbent position. The operation on the nose was performed with the head in mid-line and the chin supported. A dose of two or three cubic centimetres was given at a time. The boy breathed quietly and there was a gradual disappearance of the reflex. The drug was pushed till the pupils were rather dilated; still there were regular breathing and good colour. The inhaler was then removed. There was perfect anæsthesia for over one and a half minutes—i.e., for as long a time as was needed by the operator—then some slight movement occurred, so the inhaler was re-applied and the drug again administered till the reflex was gone and the pupils were well contracted. The gag was inserted and the adenoids and the tonsils were removed without haste during a good anæsthesia of over one minute. Perfect recovery ensued. There had been no after-effects when I left. About eight or nine cubic centimetres were used, of which a good deal remained over after inhalation.

CASE 16. *Adenoids and tonsils.*—The patient, a girl, aged 10 years and nine months, was a delicate child, with a small, long face, narrow chest, and high palate. She was placed in the recumbent posture with the head in mid-line. Mason's gag was inserted in the corner of the mouth with its blades closed. At first the child cried a little; then she breathed freely. I administered a dose of about three cubic centimetres at a time until muscular relaxation occurred and the pupils were well contracted and the conjunctiva was insensitive. There was perfect anæsthesia of about two minutes, a longer period than was needed by the operator. The patient made a very good recovery, walking upstairs to bed in 10 minutes. Ten cubic centimetres were used, of which a great deal remained over on the inhaler. A better result than this could not have been wished for.

CASE 17. *Excision of the left eye.*—The patient was a boy, aged 12 years, of the ordinary type, rather pale, and cheerful. He had just finished a good solid meal. The head was slightly raised on the pillow and about five cubic centimetres were sprayed on the inhaler. He breathed very freely and was deeply under anæsthesia in half a minute, the colour being heightened, the pupils contracted, and the colour rosy when the operation began. The inhaler was kept on for about half a minute; it was then removed, being in the operator's way. There was good anæsthesia afterwards for about three-quarters of a minute; then the patient quickly began to recover and he vomited much solid food. Before he recovered consciousness the inhaler was reapplied and by occasional inhalations anæsthesia was kept up till the end of the operation which lasted about two minutes longer. The removal of the eye was more difficult and took more time than usual. There was no evidence of shock on cutting the optic nerve and throughout there was no change from a rosy colour even during vomiting. The boy regained consciousness in half a minute after the administration had ended and then began to laugh. Then he vomited again easily. I am told that he was very pleased with himself and had no after-effects whatsoever.

CASE 18. *Small operation inside the nose; adenoids and tonsils.*—The patient was a tall woman, aged 35 years. She was placed sitting in an ordinary chair, with her head unsupported. She manifested a good deal of excitement during induction which lasted for three and a half minutes, but she was quiet during the nasal operation and removal of one tonsil; then there were much muscular excitement and spasm ending in opisthotonos, so that the patient rested on her heels and on her supported head. When she recovered she was placed in a semi-recumbent position on a couch, the blades of Mason's gag were inserted in her mouth, and after a very long (from four to five minutes) administration of ethyl chloride the adenoids and tonsil were removed.

The patient looked rather pale afterwards. This was an unsatisfactory case.

CASE 19. *Adenoids.*—The patient was a very anæmic girl, aged 19 years, with red hair. She was very excited. She was placed sitting in a chair with her head unsupported. She did not breathe well. I freely sprayed on ethyl chloride, but the conjunctival reflex was only dulled after five and a half minutes, when the operation was begun. The patient came round so quickly that it could not be completed, so she was placed in a semi-recumbent position and after a few more minutes' administration till the reflex was almost gone the operation was finished. She quickly recovered and went home in half an hour. No after-effects were noted. An unsatisfactory case.

CASE 20. *Slight adenoids.*—The patient was a woman, aged 23 years. She was placed in a semi-recumbent position. After an administration of two and a half minutes the conjunctival reflex was much dulled. There was fair operative anæsthesia of three-quarters of a minute. In a few minutes the patient walked away. She felt rather sick after the operation, probably because she had swallowed some blood.

In the last three cases the conditions were altogether unfavourable, as no operating chair or table was at hand, while the patients were very nervous and excited.

CASE 21. *Adenoids.*—The patient, a sturdy girl, aged five years, was laid flat on the table. She cried at first but breathed well and was fully under in three-quarters of a minute. The eyeballs were turned inwards; the pupils were of moderate size; the sclerotic was insensitive. The patient was of very good colour and her muscles were lax. Mason's gag was introduced and the head was lowered over the end of the table; very good anæsthesia of about three-quarters of a minute was obtained. She made an excellent recovery.

CASE 22. *Adenoids.*—The patient was a girl, aged 19 years, dark, and pale. She exhibited very slight excitement during the induction which lasted for from one minute to one and a half minutes—i.e., till the conjunctival reflex was abolished and the pupils were well contracted. Mason's gag was inserted. The operative anæsthesia was from three-quarters of a minute to one minute. There were no special after-effects.

CASE 23. *Adenoids.*—The patient was a girl, aged 20 years, of ordinary physique. She was very nervous and cried rather at first; then she breathed regularly and in one and a half minutes was well under anæsthesia. The eyeballs were turned in. There was no reflex and very slight muscular rigidity. Mason's gag was inserted and a very good anæsthesia, lasting from one and a half to two minutes, was gained. The patient made an excellent recovery. The case showed a far better result than would have been obtained from nitrous oxide which was the alternative anæsthetic.

CASE 24. *Iridectomy.*—The patient was a slightly-built boy, aged 11 years. His other eye was of glass. He cried a little at first, but was under anæsthesia in one and a half minutes. After three-quarters of a minute's anæsthesia the patient began to move, so the inhaler was reapplied, as the operation proved rather complicated, till the patient was quiet. It was again reapplied from time to time for the next few minutes to maintain anæsthesia. The patient made an excellent recovery and felt nothing.

CASE 25. *Tonsils and adenoids.*—The patient was a pale, delicate, cheerful girl, aged 12 years. The heart was slightly enlarged and was excitable. The tonsils were very large. She was placed in a recumbent posture and Breuer's inhaler was applied. Two or three cubic centimetres were sprayed on at first and then as breathing became regular five cubic centimetres more and at the end again two or three cubic centimetres. Gradual and quiet induction of deep anæsthesia ensued, the pupils beginning to dilate and the conjunctiva being insensitive. The patient was of excellent colour; the breathing was regular and rather snoring and the muscles were lax. The mask was removed and Mason's gag was inserted. The tonsils and then the adenoids were removed deliberately, and at the end of the operation there was yet about half a minute's anæsthesia to spare. The patient then quickly vomited some blood and some curdled milk which had been given by mistake an hour previously. She walked back to bed in a few minutes and was again sick, bringing up more blood and milk. Ten cubic centimetres were used altogether, much of which remained over on the mask. Had nitrous oxide, the alternative drug, been given in this case and in the usual way, the congestion of the parts, and especially of the tonsils, would have embarrassed respiration before full anæsthesia had appeared. There would besides have been cyanosis, spasm, and inconvenient jactitation, and probably an anæsthesia of half a minute at most. Had nitrous oxide mixed with oxygen been administered, though those awkward symptoms would have been absent, the resulting anæsthesia would have been at the utmost only half as long as that gained by the use of ethyl chloride.

CASE 26. *Scraping carious bone of the arm.*—The patient was a plump, anæmic girl, aged 19 years. Examination of the chest revealed nothing. She was placed in a recumbent posture. Two or three cubic centimetres were sprayed on at first and later five cubic centimetres. There was no excitement; the patient held her breath a little at first, but was unconscious in half a minute. She was then wheeled into the theatre and placed on the operating table. By this time deep anæsthesia as of chloroform had been induced. The pupils were contracted and the conjunctiva was insensitive. The colour was good, the breathing was regular, and the limbs were lax. After three minutes' good operative anæsthesia the inhaler was removed before the insertion of the last two sutures. Recovery took place in about a minute, ending with a very little retching. As the dressings were being applied the patient began to cry, but she felt no pain. On her return to the ward she vomited once slightly and then said that she felt well, but later in the afternoon she had some frontal headache. These after-effects were infinitely less than after gas and ether which she had had recently. Three and a half hours after the operation the patient had a good tea. About 10 cubic centimetres were used, with a remainder. Thus a good deep anæsthesia corresponding in depth to that of ether or chloroform was obtained in this case and I could easily have much prolonged it.

In all of the adenoid cases nitrous oxide, failing ethyl chloride, would have been administered, and the operator in most cases found much advantage in ethyl chloride over nitrous oxide as giving a much longer anæsthesia, usually lasting from three-quarters of a minute to two minutes, and causing no congestion while apparently having a distinctly stimulative action. In the recumbent position at any rate I think that the insertion of a mouth prop before beginning the administration rather hinders free breathing and upsets the patient. It is, I find, preferable to place the closed blades of a Mason's gag in the corner of the mouth and even better to insert the instrument when full anæsthesia has been induced. The drug should be given until the pupils are contracted or just beginning to dilate, and till the conjunctiva is insensitive and full muscular relaxation has occurred. Then the mouth can be easily opened and the operation proceeded with. Ethyl chloride has obviously great advantages over gas in these short adenoid operations where an extra minute or half a minute of anæsthesia makes all the difference to absolute success. On the average I use between five and 10 cubic centimetres in these cases, much usually remaining over. It would seem that in many short ear and nose operations ethyl chloride might also be used with great advantage. In ear, nose, and throat work there is apparently no objection to administration in the sitting-up position, a great gain to the operator in that the usual relative position of surgeon and patient is maintained. In the operation for excision of the eye I rather feared that there might be evidence of shock on the section of the optic nerve, and was agreeably surprised to observe none. I hope to try ethyl chloride in operations for strabismus, and as I have given gas and oxygen successfully in several of these procedures I think that it will answer even better. In dental work nitrous oxide suffices for very short cases when given in the ordinary way. For slightly longer cases ethyl chloride would be very advantageous, but for the longest cases of all—those, say, lasting for from three minutes to 10 minutes—nitrous oxide given by the Coleman-Paterson method answers every purpose since it can be continuously used during operation. I frequently thus administer nitrous oxide in hospital and private dental operations for periods of time between two and 10 minutes, and am perfectly satisfied with my results in the great majority of cases. Seitz of Constance, a well-known dental surgeon and writer on dental subjects, in a recent work on dental narcosis strongly recommends ethyl chloride for dental operations instead of nitrous oxide or ether.

If the patient be very strong and very excitable, and especially if he be an alcoholic, and it be attempted to administer ethyl chloride it is advisable to have both ether and chloroform to hand as instanced in the case of the

patient in Case 12 who showed great muscular and mental excitement. According to Lotheissen, Wiesner, and others excitement is chiefly shown by alcoholics, but the patient I have just referred to was an abstemious man.

After-effects have in all my cases been slight or absent altogether.

A rather better inhaler in one or two respects than Breuer's original one, though the same in principle, can now be obtained from Messrs. Allen and Hanburys or from Messrs. Greeff. It is made in three sizes. In neither of them is the air-way quite free enough for a large-chested patient. Probably an Ormsby's ether inhaler of the pattern made with an air-inlet would serve very well for short inhalations at any rate. I think that, contrary to the custom of some administrators who "crowd" on the anæsthetic, dosage should be by gradually increasing additions of small quantities of the drug, say two or three cubic centimetres at a time, until anæsthesia is attained and then about the same amount given per minute will generally be enough to maintain narcosis. There is decidedly a disadvantage in pouring out at the first a full dose, pressing the inhaler very firmly on the face, and keeping it on in spite of crying and struggling till the patient is under. By this method over-dosage may occur and the patient will not forget the terror and feeling of suffocation during the induction of narcosis.

The case of death after operation under the influence of ethyl chloride in no way shakes my present opinion of its value as a narcotic and I have since then taken every opportunity of trying it for the shorter surgical operations. Finally, so far as I can now judge, ethyl chloride might advantageously be used instead of nitrous oxide mixed with oxygen or nitrous oxide alone for many of the shorter operations, and more especially in the case of less vigorous patients.

irmingham.

HEADACHE.[1]

BY A. H. COPEMAN, M.A., M.D. DUB., M.R.C.S. ENG.

THE success of the general practitioner depends very largely on the ability and resource which he exhibits when confronted with the commoner, or so-called minor, ailments which afflict mankind. Prominent in this class stands headache—a condition deserving our very best attention if only on account of the immense amount of suffering which it occasions and of the increasing numbers of its victims in these days of luxurious living, rapid locomotion, and higher education. Headache may have its seat in the scalp, in the bone of the skull or its pericranium, or in the brain itself and its membrane. As instances of the first kind we have neuralgia of the fifth and other nerves. Specific disease or mechanical injury may set up painful inflammation of the bone, while the vast majority of headaches are intracranial.

Intracranial headaches may be briefly classified as follows: (1) headache the result of gross lesions of the brain or of the vessels or membranes of the brain; (2) headache occurring at the onset of the acute fevers, especially that of typhoid fever; (3) congestive headache; (4) anæmic headache; (5) nervous headache; (6) toxæmic headache; (7) sympathetic or reflex headache; and (8) migraine or sick headache.

Headache the result of brain lesions and acute fevers.—This is usually associated with other symptoms pointing to the gravity of its origin, and in such cases it is obviously the duty of the physician to fix his attention less on the headache itself than on the disease of which it is a symptom. I do not propose to refer further to headaches coming under this category beyond remarking that the presence or absence of fever, as proved by the clinical thermometer, should be of most important service to us in eliminating fevers and intracranial inflammations. The age of the patient and the condition of his arteries should also be valuable guides to diagnosis. Again, in the case of tumours and other gross brain lesions, pain is apt to be terrible in its persistency and nausea and vomiting are nearly constant concomitant symptoms; the ophthalmoscope would almost certainly afford us valuable information and sooner or later paralyses of the cranial and other nerves might become apparent.

Congestive headache.—This may be either active or passive. Both conditions may be produced by valvular disease of the heart: active congestion being the result of hypertrophy of the left ventricle, as in the headache of chronic interstitial nephritis; passive congestion occurring in lesions of the mitral orifice and conditions leading to dilatation of the right heart. Plethoric persons of middle age with too great a fondness for the table and none for open-air exercise are also very liable to this form of headache. Irregular menstruation and emotional disturbances may also be factors in the case, while cases of interest, occasionally met with in private practice, are those arising from the use of tight collars and the abuse of corsets. The pain is generally of a dull description, often affecting the whole of the head and accompanied by flushings of the face, ringing in the ears, and giddiness and exacerbation of the symptoms on stooping. When due to a hypertrophied condition of the heart aconite in drop doses frequently repeated will be of great service by slowing and calming its action. In passive congestion, on the other hand, digitalis and other heart tonics are called for and opium in small doses is often of benefit. In both cases sal volatile is of use and often results in great immediate relief. Many such cases automatically relieve themselves by the onset of epistaxis; cold affusions to the head, saline purges, and hot mustard footbaths are valuable accessories. Where there is much congestion of the portal system an emetic and free purgation will be of considerable service as a preliminary to further treatment. Afterwards the patient must be enjoined to take gentle exercise in the open air and to deny himself some of the pleasures of the table, having special regard, more particularly in the cases of active congestion, to the quantity of alcoholic liquor consumed.

Headache of cerebral anæmia.—This is generally vertical and is often of a very acute and persistent type, being, indeed, the symptom which usually drives the patient to the medical man in the more extreme grades of general anæmia; it is a very common form amongst all classes and in people of all ages. In chlorotic young girls the cerebral anæmia is only one of the manifestations of the general poverty of the blood; in old age, on the contrary, the blood itself may be in perfect order but the cerebral vessels obstruct the passage of the blood either by loss of elasticity or actual narrowing of their lumen. At all ages a weak action of the heart, whether functional or organic, may be the means of starving the brain of its needful supply of oxygenated blood. Few drugs are of any immediate benefit in this condition when it is the result of general anæmia or chlorosis, but the improvement so rapidly produced by the exhibition of iron is, of course, among the marvels of therapeutics. A glass of wine, preferably champagne as being the more rapidly diffusible, or, in contra-distinction to the congestive headache, even the mere taking up of the recumbent position will do more good at the moment than any of the so-called specifics, and I have no doubt but that much harm is done by the persistent use of these "pain-killers" in patients whose blood is already in a sadly impoverished condition. One of the symptoms in cases of poisoning by various coal-tar derivatives is the appearance of hæmato-porphyrin in the urine, showing that the red corpuscles are being disintegrated by the action of the poison. In old age alcoholic and other diffusible stimulants will give the best results, and of course in the case of there being a weak and irregular action of the heart cardiac tonics will be indicated.

Nervous headache.—This is the headache of general debility and neurasthenia. It may occur in any part of the cranium and is often fixed in one small spot, as in the Clavus Hystericus of the neurotic girl. This type of headache bears a very close relationship to the anæmic form. Migraine, which generally occurs in patients of the nervous diathesis, should perhaps be included under this heading, but will be discussed later by itself. Over-lactation and worry in weakly women, excessive study, over-application to business, and the excesses of youth, must all share the responsibility for the increasing numbers of the patients of this class. Especial care is necessary in dealing with them to avoid, if possible, prescribing the various proprietary analgesics lest a habit be induced in no degree less deadly or degrading in its results than that of alcoholism or morphomania. Excellent results

[1] Thesis for the degree of M.D., Trinity College, Dublin.

will be obtained from the use of sal volatile, the bromides, and camphor, with perfect rest and quiet in a darkened room; and a most important need is to brace up the exhausted nervous system in the intervals between the attacks by the intelligent use of the dilute mineral acids, the various preparations of iron, zinc, and arsenic. Alcoholic stimulants are best avoided and where iron and arsenic disagree cod-liver oil is of good service in improving the general nutrition. Phosphorus, especially in the form of the hypophosphites, is also to be highly recommended.

Toxæmic headaches.—These form the group perhaps most frequently met with of all and are the result of the introduction into the blood of poisons of many and diverse descriptions. The headache of fevers might accordingly be classified under this heading. Dyspeptic and bilious headaches are in reality toxic, the products of faulty digestion and of the imperfect action of the liver finding their way into the general circulation. Other forms of headache belonging to this class are those of acute alcoholism, uræmia, gout, rheumatism, malaria, and lead-poisoning, and also no doubt those arising from confinement in close, stuffy, and ill-ventilated rooms and from the inhalation of sewer gas. Toxæmic headache is more frequently frontal and in the dyspeptic and bilious forms finds prompt relief from the exhibition of an emetic followed by a brisk mercurial purge, with, if possible, complete rest to the stomach in the shape of actual starvation for from 12 to 24 hours. Quantities of pure water may be drunk with advantage and the irritated stomach may be soothed with a few doses of the liquor bismuthi and the dilute hydrocyanic acid in an effervescing draught. In the malarial headache which is still exceedingly common in the fen districts of England opium has long been considered a specific, but five grains of quinine dissolved in half a drachm of the dilute hydrobromic acid is every bit as serviceable and is not open to the same objections as is the continued use of opium. In the gouty, rheumatic, and other toxæmias the appropriate remedies for the primary condition will afford the means of effecting a cure, but in that particular form of rheumatic pain affecting the muscles and aponeurosis of the scalp perhaps more benefit may be expected from the external application of belladonna, chloroform, and other soothing liniments.

Sympathetic or reflex headache.—This may be the result of eye-strain from over-use, as in prolonged microscopical work, of mere general debility, or of errors of refraction or some muscular insufficiency, as of the external rectus muscle, and this is a very frequent cause of persistent headache and one which is very likely to be overlooked in the hurry of general practice. Dental caries, diseases of the throat and nasal passages (as in the headache of enlarged tonsils), and ovarian and sexual derangements are well-known culprits. Attention to the organ whence the irritation springs is the only means of giving relief to the sufferer.

Migraine or sick headache.—This, the most intractable of all forms of functional headache, has been the subject of endless dispute amongst pathologists and is now generally thought to be due either to a so-called nerve-storm of the nature of epilepsy or to some other ill-defined disturbance in the cortex of the brain. Others trace it to profound alterations taking place in the circulation of the brain, and it is generally agreed that it is not due to gastro-hepatic derangement but that the cerebral disturbance constitutes the primary lesion. The undoubted influence of neuropathic heredity in this affection is often brought forward as a proof of its central origin, but in practice we find the bilious and gouty habits equally hereditary, and many sufferers from typical migraine find more relief from the old-fashioned blue pill and emetic than from the more modern methods dictated by the pathologist. I have had several patients who have been able to avert the threatened seizure by the prompt exhibition of five grains of calomel. I am myself strongly inclined to place migraine in the toxæmic group and to refer the symptoms to profound poisoning of the substance of the brain by a blood loaded with the toxic products of incomplete and faulty digestion. But little can be done for the unfortunate sufferer after the incidence of the attack. I am in the habit of prescribing a powder consisting of five grains of phenacetin with two grains of caffeine, but from 12 to 24 hours' rest and a night in bed will be necessary before complete relief will be secured.

Cowes, Isle of Wight.

THE PROGNOSIS AND TREATMENT OF CASES OF ASCITES OCCURRING IN THE COURSE OF ALCOHOLIC CIRRHOSIS OF THE LIVER,

WITH SPECIAL REFERENCE TO THE TREATMENT BY OPERATION.[1]

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THERE is at the present time a considerable want of unanimity regarding the prognosis of cirrhosis of the liver after the appearance of ascites. Formerly all such cases seem to have been looked upon as hopeless, but at the present day, while their extreme gravity is fully recognised, a somewhat more hopeful view is taken of them, based upon the fact that a number of cases have been recorded in which the ascites has temporarily, or even permanently, disappeared after tapping. Dr. W. B. Cheadle, in his recent Lumleian Lectures, has shown that much of the confusion regarding cirrhosis of the liver has arisen from a failure to differentiate between the several types and stages. It is, as Dr. Cheadle clearly shows, of great importance to distinguish the different stages and varieties if any real advance is to be made, and it seems to me that this importance has become still more imperative in face of the fact that an operation for "cirrhosis of the liver" has recently been introduced—an operation which will probably meet with but little success unless the cases are carefully selected.

The subjec tis a wide one and necessarily somewhat difficult to summarise, but I have endeavoured to collect information from the works of others and from my own experience which will, I hope, among other things, show the following points:—1. That ascites arising during the course of a case of alcoholic cirrhosis of the liver may be due either (*a*) directly to the cirrhosis or (*b*) may depend upon some condition co-existing with the cirrhosis. 2. That ascites when directly dependent upon the cirrhosis is almost always a fatal symptom, while, on the other hand, ascites associated with cirrhosis, but not directly dependent upon it, may often be temporarily relieved and not unfrequently cured. 3. That under these circumstances laparotomy performed on cases of cirrhosis of the liver with ascites is only likely to be successful in those cases in which the ascites is an associated condition of the cirrhosis and not directly dependent upon it, and that if this is so it would seem misleading to look upon the operation as being one for the cure of cirrhosis of the liver; it should rather be looked upon as one for the relief of cases of ascites, some of which, although occurring in the course of cirrhosis of the liver, may still be amenable to treatment.

In the first place it will, I suppose, be granted by everyone that the condition of cirrhosis itself cannot be cured—i.e., the connective tissue when once formed can not be got rid of by drugs or any other means at our disposal. That an advanced condition of cirrhosis may remain latent is true and that it may become arrested is possible, but it cannot be cured. The question then arises as to how far symptoms may be relieved, and especially the ascites, which is frequently the first thing which causes the patient to seek advice. The recoveries which have taken place after the onset of ascites are attributed to a development of the collateral circulation, whereby the blood in the portal veins finds its way directly into the systemic circulation without passing through the liver, and on this supposition the usual custom in cases of ascites associated with alcoholic cirrhosis is to give a guarded prognosis, always bearing in mind that in a certain small percentage of patients the ascites disappears after tapping.

That patients recover from ascites, which clinically appears to be due to cirrhosis of the liver, is perfectly true, and it is equally true that recoveries take place from ascites associated with cirrhosis, but it is probable that it is only very rarely indeed that recoveries take place when the ascites is directly due to the cirrhosis. This certainly seems to have been the view held by authorities a few years ago. In

[1] A paper read before the Royal Medical and Chirurgical Society on June 11th, 1901.

Reynolds's "System of Medicine" the following passage occurs: "It is probable that in patients in whom very free collateral circulation is established the progress may be slower, as cases are on record in which ascites has disappeared when the various venous anastomoses have been largely formed. It is possible that in such cases of free restoration of circulation by means of collateral channels, if the uninjured portion of the liver be sufficient for the purposes of life and the atrophy arrested, that existence may be maintained; but there does not appear to be good evidence of such cases and results having occurred." Dr. J. S. Bristowe,[2] in speaking of cases of cured ascites, clearly recognises the ascites which may be associated with cirrhosis from that which is directly due to it, for he says: "We have reason, therefore, to believe that the ascites which appears in the course of cirrhosis and such like diseases of the liver may occasionally be immediately due to the super-addition of some remediable morbid condition and may disappear temporarily or permanently with the removal of that condition, even though the hepatic disease be still progressing towards its inevitable fatal termination." More recently a valuable contribution to the subject has been made by Dr. W. Hale White[3] who found that many cases of ascites which during life were thought to be due to hepatic cirrhosis were proved after death to depend upon something quite different, and in others which were tapped frequently there was some other cause present besides the cirrhosis which would account for the ascites, the most frequent being chronic peritonitis and perihepatitis. Dr. Hale White concluded that when ascites depends upon cirrhosis of the liver the patient rarely lives long enough to survive more than one tapping and he published 34 cases illustrating these points. 10 suffered from cirrhosis with ascites and died before tapping was necessary; the average duration of life after the abdomen was first noticed to be enlarging was only eight weeks. 14 were undoubted cases of cirrhosis in which paracentesis was performed and not one of them survived the first tapping long enough to render a second tapping necessary and in not one was there any evidence that the tapping was beneficial. 10 cases were regarded during life as having cirrhosis and were tapped more than once; of these the diagnosis proved to be wrong in four cases, while the remaining six cases had chronic peritonitis associated with the cirrhosis. Dr. White's teaching upon this subject is, I think, so generally accepted that it scarcely needs any corroboration; but as I have made a number of post-mortem examinations upon cases of cirrhosis during the past two and a half years I have collected them and also looked up some others from the post-mortem records of the Middlesex Hospital, making altogether 18 cases, and on referring to their clinical histories the seriousness of the disease is well seen and their results in every way support Dr. White's conclusions. 12 of the 18 died before tapping was necessary or soon after it had been performed once. Six survived more than one tapping, and in these, with the possible exception of one, there was adequate cause for the ascites in addition to the cirrhosis. The cases which survived only one tapping ran a very similar course to those recorded by Dr. White, dying within a few weeks of the onset of the ascites.

When the ascites is associated with the cirrhosis the prognosis, as far as the ascites is concerned, depends upon the stage of the cirrhosis at which it arises. It would seem that the associated ascites in cases of cirrhosis is also usually a late symptom, which accounts for the great fatality of this condition, which, although considerably less than the cases dependent directly upon the cirrhosis, is still great, only a case here and there doing well for any length of time. The results of post-mortem examinations show that the cases of ascites which during life appear to be due to cirrhosis of the liver may be divided into three groups: (1) those in which the diagnosis of cirrhosis is erroneous, the ascites being found after death to be due to some entirely different cause; (2) those in which ascites is associated with cirrhosis, but actually due to some other cause; and (3) those in which the ascites is directly dependent upon the cirrhosis.

1. The first division of this group need not now be considered except for the purpose of emphasising the necessity of basing the evidence of cures upon ultimate post-mortem examinations. The liabilities of making errors in the diagnosis of the causes of ascites are very great, and as an example a case recorded by Dr. Ewart may be mentioned in which the patient was tapped 52 times and also had laparotomy performed on the supposition, which was proved afterwards to be erroneous, that the ascites was due to cirrhosis.

2. The commonest cause of ascites associated but not directly dependent upon cirrhosis of the liver is undoubtedly chronic peritonitis and perihepatitis. Dr. Hale White's cases show this and my own post-mortem experiences fully support the frequent association of this condition. Dr. Bristowe, in discussing the causes of ascites,[4] alludes to the part which changes in the capsule of the liver play as follows: "This formation, which is probably of inflammatory origin, is sometimes associated with cirrhosis or other morbid states of the liver, but is sometimes present when the liver seems otherwise perfectly healthy, and where it is the sole visible pathological phenomenon associated with ascites." It may, then, I think, be fairly considered that the ascites associated with latent cirrhosis is very frequently due to these conditions.

3. The third group comprises those cases in which the ascites directly depends upon the cirrhosis, and the prognosis here appears to be very bad, the majority of cases dying within a few weeks after ascites has first been noticed. The average duration of life after the onset of ascites in Dr. White's cases was only two months, and the collection of cases which I have made shows an equally grave prognosis. Indeed, many cases of cirrhosis die before tapping becomes necessary, and out of 46 cases in which cirrhosis was discovered after death in 20 only was there more or less accumulation of ascitic fluid (Bristowe), facts which all point to ascites being a late symptom. If, then, it is recognised that ascites is frequently produced by chronic peritonitis and perihepatitis, it is no proof of the curability of ascites due to cirrhosis to cite cases in which these conditions are present. In order to prove the curability of ascites due directly to cirrhosis, post-mortem evidence must be obtained of uncomplicated cases of cirrhosis which have been tapped one or more times at some date previously and afterwards lived in good health. Such cases no doubt do occasionally occur, but I think they must be extremely rare and considered as exceptions which in no way alter the general aspect of the question. Personally, during the time that I have been pathologist at the Middlesex Hospital I have never met with such a case. Dr. W. B. Cheadle has recorded in his recent lectures five cases which he has met with as great examples of improvement in atrophic cirrhosis. One of these was eventually lost sight of and therefore cannot be regarded as a proved case. Of the remaining four, upon which post-mortem examinations were ultimately made, the following are brief extracts of the conditions present.

CASE 1.—A woman, aged 53 years, was admitted into the hospital suffering from ascites and hæmatemesis; she was tapped twice and left the hospital in two months free from ascites. Nine months later she was readmitted with ascites and she was again tapped. There was no return of ascites but the patient had a severe attack of pleuro-pneumonia, from which she recovered, but she died a month later from acute bronchitis. At the post-mortem examination there was found a typically hobnailed, cirrhotic liver, weighing 38 ounces, with thickened capsule, but no general perihepatitis or peritonitis; nor were there any thickening of, or adhesions to, neighbouring structures.

CASE 2.—The patient, a man, aged 43 years, died one and a half years after first coming under treatment for ascites. At the post-mortem examination the cirrhotic liver was found to be covered with thick false membrane.

CASE 3.—The patient, a female, survived the first treatment of ascites one and a half years. She was tapped four times. At the post-mortem examination abundant adhesions were found between the liver and the neighbouring organs.

CASE 4.—A man, aged 35 years, was tapped 11 times and also had laparotomy performed. The post-mortem examination showed atrophic cirrhosis. Perihepatitis was also present.

On examining these four cases it will be seen that in three of them at least there were signs of perihepatitis and peritonitis, which therefore may have caused the ascites. In Case 2 the liver was covered with a thick false membrane; in Case 3 there were abundant adhesions between the liver and neighbouring organs; and in Case 4 definite perihepatitis is recorded. In Case 1, on the other hand, there does not

[2] Transactions of the Clinical Society of London, vol. ii.
[3] The Causes and Prognosis of Ascites, Guy's Hospital Reports, 1892.
[4] Reynolds's System of Medicine.

appear to have been any cause for the ascites except the cirrhosis, and it appears to be one of the exceptional examples of a temporary recovery.

Dr. H. Hawkins[8] concludes that after ascites has set in "the conditions necessary for the restoration of health must be very rarely attained." The clinical course of cirrhosis of the liver may then, I think, be summed up as follows. Cases may exist for years without any ascites, or indeed without any definite symptoms, but during this period ascites is liable to arise from some associated condition, the most common being chronic peritonitis and perihepatitis. Ascites arising from this cause may be frequently relieved and occasionally it eventually entirely disappears, and the patient then returns to his former state of latent cirrhosis without any ascites. As time goes on the cirrhosis progresses until frequently it itself gives rise to ascites, for which tapping is of no avail, and the patient succumbs a few weeks after its onset. Of course, there need not be, and frequently is not, any long interval between the first and last tapping, as the associated ascites often merges imperceptibly into that directly dependent upon the cirrhosis. Examples of these are to be found in cases which are tapped repeatedly and survive for a few months. In fact, all stages may be frequently seen except that of an uncomplicated cirrhosis which has survived several tappings and recovered, and there is but little post-mortem evidence of the occurrence of this condition. This view would also seem to be in harmony with clinical experience regarding the difference in the prognosis of ascites in large and small livers. Dr. Cheadle in discussing prognosis says: "To put it broadly, and speaking clinically, the cases which do well are those in which the liver, apparently large, exposes a flat, hard surface to the abdominal front, extending far below the edge of the ribs and sometimes down to the umbilicus." Now it is precisely in these large livers, which are almost certainly in many cases the early stages of the smaller ones, and therefore presumably in an early stage of the disease, that the ascites is more likely in many cases to be due to an associated condition, and not in that early stage so likely to be directly dependent upon the cirrhosis, and, this being so, cases of ascites with large livers would be likely to do better than those with small livers, which, as already stated, Dr. Cheadle has shown to be the case.

TABLE OF CASES OPERATED UPON FOR ASCITES DUE TO CIRRHOSIS OF THE LIVER.

Case.	Operator.	Age.	Sex.	Previous history and conditions found at operation.	Result.	Remarks.
1	Drummond and Morison.	42	F.	The liver was enlarged, pale, and smooth, but not harder than normal.	Recovery from operation; recurrence of ascites.	The patient required frequent tappings (69 times between date of operation and death). She died 19 months after the operation. No necropsy.
2	Drummond and Morison.	39	F.	The patient was tapped frequently before operation; the liver was found to be "typically cirrhotic."	Recovered; no return of ascites.	The patient was perfectly well at the end of two years. She finally died after an operation for ventral hernia. At the necropsy there were found adhesions with vessels, some of them of large size, passing between the omentum and the viscera to the parietes; the liver was atrophic and degenerated; the spleen was about four times its natural size.
3	Morison.	42	M.	The illness was of about eight weeks' duration. The liver was cirrhotic, but not so contracted as was expected; the spleen was enlarged.	Recovered; no return of ascites.	The patient was known to be quite well two years after.
4	,,	54	M.	There were cirrhosis of liver, enlargement of spleen, and ovarian cyst.	Died.	At the necropsy partial examination showed the patient to have contracted kidneys.
5	Schelky.	—	—	—	,,	The patient died from delirium tremens.
6	Lens.	61	M.	The liver was atrophic.	Recovered; ascites recurred.	The patient was tapped five times before death, which occurred six months after the operation.
7	Talma.	9	M.	The liver was enlarged and its surface was granular; there were splenic enlargement and parenchymatous nephritis.	Recovered; no recurrence of ascites.	The patient was perfectly well 26 months after operation.
8	Neuman.	45	M.	There was enlargement of the spleen.	Recovered; no recurrence of ascites six months after the operation.	—
9	Weir.	39	M.	The liver capsule was thickened and the spleen was bound down by adhesions.	Died on the fifth day after the operation.	Purulent peritonitis.
10	Rolleston and Turner.	52	M.	There was ascites of two months' duration; the patient had been tapped twice before operation; the liver was markedly cirrhosed.	Recovered; recurrence of ascites requiring frequent tapping.	When heard of about four months afterwards the patient was ill in bed with distended abdomen and œdema of the legs.
11	Rolleston and Turner.	45	M.	There were œdema of the feet and ascites of about a month's duration, preceded by hæmatemesis; the liver was markedly hobnailed but was free from adhesions; the peritoneum was much injected.	Recovered; remained much improved; four months after there was, however, a trace of ascites and some œdema of the feet.	—
12	Bossowski.	9	F.	The liver was cirrhotic.	Recovered; recurrence of ascites.	The recurrence of the ascites appeared to take place less rapidly after the operation.
13	Frazier.	45	M.	The liver was cirrhotic; the omentum was short and thickened.	Recovered; recurrence of ascites for a time.	The patient required tapping twice after the operation; after that there was no return of ascites at the end of three months.
14	Van de Meule.	—	—	—	Died.	—

[8] Cirrhosis, Allbutt's System of Medicine.

TREATMENT.

The treatment of the later stages of cirrhosis of the liver consists chiefly in attempting to relieve the ascites, which can in most cases only effectually be done by tapping. Formerly it was always considered wise to put off tapping as long as possible, now it is generally advised to tap early. This diversity of opinion has no doubt arisen from a confusion as to the actual causes of the ascites, some cases being benefited by this treatment and others not. Without, however, going further into the question as to whether tapping should be performed early or late, it may at once be stated that there is no good evidence to show that tapping is of any benefit in those cases where the ascites is directly dependent upon the cirrhosis. Dr. White found that in 14 cases the length of life after tapping was usually only a few days (the shortest was two days, the longest 40), and, as

already stated, patients in this group of cases seldom live long enough to require tapping more than once or twice.

Recently a more radical operation has been introduced with a view of curing cases of cirrhosis with ascites. First introduced into this country by Morison and Rutherford, the operation consists briefly in opening the abdomen and promoting adhesions between the peritoneum, the omentum, and the parietes, the idea being to establish a free collateral circulation which shall relieve the portal system and so prevent the recurrence of ascites. This method of treatment has met with a certain amount of success and I append a table of those cases which I have been able to find particulars of. I have adopted the following table chiefly from a paper by Frazier,[6] but have made various additions to the details where I have been able to find them.

It is very difficult to draw any definite conclusions from this table, since the cases operated upon are so various and often likewise complicated. It is, indeed, rather a table of operation for ascites from various causes than one in which the ascites can be said to be due to cirrhosis. For instance, in Case 4 in the table there was an ovarian cyst and in Case 7 there was parenchymatous nephritis. If, however, we consider for the moment that these cases represent the general run of clinical cases which are diagnosed as cirrhosis with ascites it will be interesting to see how the results compare with those of tapping.

In this table we have, out of 14 cases, four which may be regarded as cured of the ascites, or, at any rate, very greatly benefited; they are Morison's cases (Case 2 and Case 3), in both of which the patients were well two years after; Talma's case (Case 7), where the patient was well 26 months after; and Neuman's case (Case 8), in which there was no recurrence of ascites six months after operation; while two others (Case 11, Rolleston and Turner, and Case 13, Frazier) appear to have been considerably improved, but cannot be regarded as cured, since in one (Rolleston and Turner) there were definite traces of ascites and œdema of the feet four months after, and in Frazier's case the patient required tapping twice after the operation, and the record of freedom from ascites only extends for three months.[7] In making a comparison with tapping it must be remembered that many cases which are operated upon are those which have already survived several tappings and therefore, as has been already shown in the first part of this paper, these are to a large extent removed from the more serious group, which die after the first tapping, and, further, it must be remembered that successful cases are more likely to be recorded than unsuccessful ones.

If now we take the records of a similar set of clinical cases diagnosed as cirrhosis and ascites like the above, without any attempt to further classify them into the groups I have previously mentioned, we shall similarly find a considerable number of cases greatly relieved and a few that have quite recovered. Dr. Cheadle, for instance, quotes 11 cases in which recovery was either temporary or prolonged, exclusive of those in which there was mere relief of symptoms sufficient to admit of discharge from hospital, or private cases which were not traced afterwards, which is a very large percentage and one which I venture to think will compare very favourably with the statistics of cases operated upon.

Those who consider the operation as one for cirrhosis of the liver look upon the ascites as being due to mechanical causes and capable of being relieved by the establishment of a free collateral circulation. There are, however, good reasons for believing that the occurrence of ascites is not capable of such a simple explanation, and it is thought by many that it may be due to a toxæmia which accompanies the later stages of the disease. That there is congestion of the portal system in cirrhosis there can be no doubt, as evidenced by hæmorrhages and frequent enlargement of veins, but that it will explain many of the later symptoms, including the ascites, is not so certain. Moreover, there does not seem to be any evidence at present that the operation has been successful in an uncomplicated case of cirrhosis with ascites. Morison advises operation after one or two tappings; in his conclusions regarding the operation he says: "It is no longer advisable to treat the cirrhosis by repeated tappings if the patient is otherwise sound and in fair general condition. After one or two tappings have failed operation offers the best chance of prolonged and useful life." Frazier considers the chief indication for the operation to be the presence of ascites due to obstruction of the veins of the portal system, when the obstruction itself is due to cirrhosis of the liver, but qualifies this later by stating that the cases which should be operated upon are those to which paracentesis has failed to give relief. Another view, suggested by Rolleston, is that the operation gives relief by affording increased nutrition to the liver and promoting hyperplasia of the cells, and on this ground he thinks that operative interference would probably succeed better in the pre-ascitic stages than in the later ones, but considering how long the disease may remain latent and the uncertainties of its course this suggestion is scarcely practicable. There is, however, I think, one other possible explanation simpler than both of the above, and that is that the beneficial effects which follow the operation are simply due to the formation of adhesions between the two layers of the peritoneum and so leading to obliteration of its cavity. This would in itself be sufficient to account for the non-return of ascites, without any necessity for explaining it either by the development of a collateral circulation or by increased nutrition of the liver cells, both of which would require very strong evidence of their existence before they can be accepted as facts.

Obliteration of the peritoneal cavity, partial or complete, is not unfrequently seen in the course of tuberculous peritonitis and the same process of obliteration, of course, often occurs in connexion with the pleura and pericardium. An interesting case in which obliteration of the peritoneal cavity apparently occurred after tapping has been recorded by Dr. W. Cayley[8] and may be mentioned here. The patient, a man, was suffering from alcoholic cirrhosis and ascites and was tapped four times. After the last tapping some symptoms of peritonitis appeared and the fluid did not again collect. He was discharged convalescent, and although his ultimate condition is not known he was seen by Dr. Cayley well and driving his cab two years afterwards. In commenting upon this case Dr. Cayley suggests the possibility of relieving ascites by exciting adhesive peritonitis as often happens in cases of ascites due to tuberculous peritonitis.

If the operation is to survive it must be shown that it possesses some distinct superiority over tapping, since, notwithstanding the slight risk of abdominal explorations, it is in every way more formidable than tapping, and it must always be remembered that many of the cases which require it are neither good subjects for operation nor for an anæsthetic.

From what has already been said it will, I think, be gathered that the cases best suited for operation are those in which the ascites is only an associated condition of the cirrhosis. The presence of cirrhosis is, of course, not by any means necessarily a contra-indication, but the further advanced the cirrhosis the less chance must there be of the operation being successful, and if there is good reason to believe that active symptoms of cirrhosis have supervened and that the ascites is directly dependent upon them the operation should not be undertaken, for at this stage, putting the cause of the ascites on one side, the liver is nearly always in such a condition as to be incompatible with prolongation of life. There must, of course, often be great difficulty in deciding whether the cirrhosis is still latent, and to this end the most careful attention must be given to the general condition of the patient and any signs that may denote that the liver-cells are not performing their functions well. Errors, however, will be further eliminated by selecting only such cases for operation as have been tapped several times, and so looking upon the operation as one likely to relieve some cases of ascites associated with cirrhosis of the liver, and not as one directed towards the actual liver condition itself; but the operation should not, it seems to me, ever be substituted in the first place for the more simple method of removing the fluid by tapping.

Queen Anne-street, W.

[6] American Journal of the Medical Sciences, December, 1900.

[7] Since the above was written a paper on the subject has appeared by Dr. Packard and Dr. Le Conte (*American Journal of the Medical Sciences*, March, 1901), in which 22 cases have been collected. Two of these are recorded by the authors. One patient, a man aged 63 years, after repeated tappings, was operated upon on Oct. 13th, 1900. He made an uneventful recovery from the operation, but gradually lost ground and died on Dec. 5th, 1900. The second case was that of a man, aged 52 years, admitted into hospital on Sept. 7th, 1900, with an enormously distended abdomen. He was tapped on the 11th, but as the fluid reaccumulated rapidly he was operated upon on Oct. 13th, 1900. He died on the 17th, four days after operation.

[8] Journal of the Middlesex Hospital, March, 1897.

A RARE FORM OF PURPURA COMPLICATING DIPHTHERIA.

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A GIRL, aged 10 years, was admitted to the South-Eastern Fever Hospital on Oct. 8th, 1900, for diphtheria, it being the fourth day of the disease. There was membrane covering both tonsils and uvula, and a pure culture of Klebs-Löffler bacilli was obtained on cultivation. A large dose of antitoxin was injected. On the seventh day from the onset the throat was clean, but a raw surface remained where the membrane had separated. In the evening, however, the patient vomited and this recurred at frequent intervals throughout the next 36 hours; there was blood in the vomit on several occasions and one stool was passed containing a small amount of blood. Next morning a rash was noticed on the elbows, large papules of a deep purple colour, and there were numerous petechiæ on the buttocks. The heart was not dilated and the sounds were good but the pulse became very weak towards night and the patient was much exhausted by the continued vomiting. Next morning the vomiting had ceased, the pulse was better, but she was in a state of extreme exhaustion. Fresh petechiæ had appeared on the elbows, knees, and ears, and also over the malar bones, where they were large and well marked. The following day the rash on the elbows was seen to be becoming vesicular, fresh petechiæ had appeared on the buttocks, and there was a purplish mottling of the legs and feet. The vesicles on the elbows became confluent and formed large bullæ filled with dark, broken-down blood, and fresh vesicles appeared on the ankles. The bullæ were opened and dressed. The petechiæ on the buttocks and ankles were now very numerous, and the patient complained of stiffness of the elbows and inability to move them, but there was no pain when at rest—this was on the fifth day from the commencement of the vomiting. The tongue was dry and coated, the spleen was not enlarged, and there were no abdominal symptoms; the urine contained a trace of albumin. No definite change could be discovered in the blood on microscopical examination, but a blood count could not be made. On the next day there were pain and tenderness, but no swelling, of both elbows and the left hip-joint; the petechiæ were disappearing from their original sites and the bullæ were healing, but fresh petechiæ were noticed on the forearms. An erythematous rash with a few patches of urticaria of the type common after the use of antitoxin developed and became more marked after a few hours and the left hip-joint was noticed to be slightly swollen and painful, while over the front of it there were a few small ecchymoses. There was still a trace of albumin in the urine and on this day there were two stools containing blood to the amount of seven ounces altogether and during the night two ounces more were passed, while there were ecchymoses over the posterior iliac spines, probably due to the bed-pan. The abdomen was tender but the spleen was normal and also the heart and the patient was taking milk freely. The pain in the joints disappeared and there was no marked anæmia. The following day—the ninth from the onset of vomiting—she vomited twice, curds but no blood. Almost all traces of the original rash had gone except on the elbows, but a fresh crop of petechiæ appeared on the forearms and hands. There were also three small swellings over the bones of the forearms which were rather tender, but otherwise she had no pain. The cardiac dulness extended from mid-sternum to one finger's breadth internal to the vertical nipple line, and a very slight systolic murmur was audible just internal to the apex. On the eleventh day there was again a small amount of blood in the stools which were green in colour, having been black for several days. Next day a small ecchymosis was noticed on the left forearm, and a slight painless swelling on the flexor surface of the right forearm. The patient was much brighter and she felt hungry so some solid food was given for the first time since the vomiting set in. Good progress was made for the next 10 days, when the heart dulness was found to have increased as far as the nipple line on the left side. The first sound was weak and toneless and the pulmonary second sound was much accentuated, but after another 10 days the dulness was normal and the sounds were good, so she was allowed to sit up for the first time. On Nov. 19th, 40 days from the initial vomiting, she again vomited three times; the breath was foul, and there were scattered points of deposit on the tonsils, but there were no diphtheria bacilli found on cultivation. The temperature was 100·4° F., the highest recorded since the onset of the diphtheria. On the 21st a sudaminal rash appeared on the trunk, but there was no sign of purpura. The throat cleared up and there was no further vomiting. The cardiac dulness was now from the right sternal margin to just within the left nipple line; the first sound at the apex was weak and the pulmonary second sound was accentuated. This remained unchanged for three weeks, when a faint systolic murmur was detected at the apex conducted for a short distance beyond the nipple. The murmur gradually became less and finally disappeared, the cardiac dulness returned to its original limits, and the patient was discharged on Jan. 1st, 1901, as cured. Throughout the attack the temperature varied from 97° to 99°, rarely going higher and never above 100·4°, which was recorded on the occasion of the attack of tonsillitis. There was no history of any previous attack of similar nature or of rheumatism.

Remarks.—On consideration of the symptoms I think that there can be no doubt that this was a case of Henoch's purpura, although in some features it resembled rheumatism. Henoch describes the condition to which his name has been given as a form of purpura accompanied by colic, tenderness of the colon, vomiting, intestinal hæmorrhage, and rheumatoid pains. He also states that one of the links in the chain of symptoms may be absent and that it is characteristic that the symptoms come on in separate outbreaks with intervals of several days or weeks or even a year. Fever is not invariably present and is generally only moderate in degree.[1] All these features were present in the above case; the abdominal tenderness was never very marked, but the vomiting was extremely severe and the purpura was very well marked. The question of rheumatism must be considered, but such extensive purpuric manifestations are rare in that disease, although cases have been recorded.[2] The arthritic symptoms were quite a minor feature and did not resemble rheumatism in its usual form. The cardiac dilatation which might be attributed to rheumatism is even more characteristic of diphtheria. One of the most important points against rheumatism is the almost complete absence of pyrexia; the tonsillitis, which might be regarded as rheumatic, is an interesting feature, but was only slight and was not accompanied by any arthritis, while it is occasionally met with in convalescence from diphtheria without any other complication. On the whole, therefore, I consider that rheumatism may be excluded. Henoch states that he never found any marked changes in the blood and he was inclined to attribute the condition to a vaso-motor neurosis. Zimmerman[3] has described changes in the blood-vessels chiefly affecting the media and adventitia, and other authorities have made similar observations in severe cases. Conty[4] holds that Henoch's purpura is of nervous origin and the concurrence in this case with diphtheria is very interesting in view of the marked influence of diphtheria on the nervous system. At the onset of the vomiting I was inclined to think that it was due to cardiac paralysis, but with the appearance of the purpura which was very different from that seen in the hæmorrhagic form of diphtheria, this view was abandoned. Whether the diphtheria stood in any causal relation to the other condition is a question which I am unable to answer.

The relation of the antitoxin administered may be questioned, but many other cases were injected with the same batch and in none did any of the above symptoms appear. The arthritis might be attributed to the antitoxin and it was practically concurrent with the typical antitoxin rash which appeared. It lasted, however, longer than antitoxin pains usually do and appeared to be due to some slight effusion into the joints rather than to be in the fibrous structures surrounding the joints as is usually the case with antitoxin joint pains. I am personally inclined to think that they were due to hæmorrhages into the joints, the conspicuous features being stiffness and tenderness rather than pain; the swellings over the bones of the forearms were probably subperiosteal hæmorrhages, while the swelling on the flexor surface of the forearm may have been due to hæmorrhage in or between the muscles

[1] Lectures on Children's Diseases, vol. ii.
[2] Poynton: THE LANCET, Oct. 28th, 1899.
[3] Archiv der Heilkunde, 1874.
[4] Gazette Hebdomadaire, 36-40.

or to a transient œdema such as has been described in similar cases. The condition is a very rare one. Henoch[5] describes eight cases as occurring in his clinic from 1868 to 1887, while Osler records 11 cases.[6] The prognosis appears to be fairly good. Of Henoch's eight cases six recovered, while Osler had three deaths in his 11 cases. Most of the fatal cases have been due to acute nephritis. The treatment adopted in the case under notice was complete rest with milk diet until all gastro-intestinal symptoms had subsided. The joint pains were readily relieved by salicylates and antipyrin and the general routine treatment was by means of iron, arsenic, and cinchona. I am indebted to the courtesy of Dr. F. M. Turner, medical superintendent of the South-Eastern Hospital, for permission to publish this case.

Buxton.

THE DECIDUOUS DENTITION AS A FACTOR IN THE HEALTH OF THE CHILD.[1]

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THE consideration of this question groups itself under three headings: (1) the influence of the deciduous teeth on the general health during their eruption; (2) the important part which they play in assisting the nutrition of the child; and (3) the diseases, local and general, which may be induced or increased by them when they have become carious. In a paper it would be impossible to enter fully into a consideration of the whole of these points. I do the more readily confine my remarks to a general argument, since we may hope to hear the opinions of those among us who are so amply qualified to give us authoritative statements on all concerning the health of children. Thus, for instance, the infantile diseases associated with the eruption of the deciduous teeth do not as a rule come under the notice of the dental surgeon, but it would be interesting to hear opinions as to how far these troubles may be looked upon as due to the difficult eruptions of the teeth—whether they are merely coincident phenomena or whether they themselves may be the existing cause of the delayed eruption, the disease interfering with what in the normal state should be a painless physiological process. It is, however, interesting in this connexion to recall the fact that the date of the eruption of the teeth is somewhat variable, at all events in children of so-called civilised races. It is not an uncommon event to find successive groups of teeth erupting without that intervening period of rest which is laid down as the normal physiological course. This, doubtless, may be regarded as an expression of an abnormal systematic condition; nevertheless, it may in itself be a sufficient factor to determine various reflex or other pathological conditions. Thus in one child of the age of about 18 months the development of fits of an epileptiform nature was coincident with the eruption, not only of the four canines, as is normal at that age, but with that of the four second molars, which should not have appeared till six months later. The eruption of eight teeth coincidently would appear to have been the possible cause of the convulsions. Though, of course, why four molars erupted prematurely remains unexplained.

Though logically it would be better to take the part played by a normal dentition in maintaining the health of a child, before considering the constitutional effects which this may have when diseased, yet, in inverting the sequence, I perhaps strengthen the force of my argument, since reflection on that which we have lost is more pregnant with good intention than is the contemplation of that which we possess. Ignoring those unhappy children who are born with teeth—blighted probably by stomatitic inflammation in utero—which are teeth but in name, useless, dwarfed, decayed, even necrosed from the very beginning, I assume that the teeth are cut in, at any rate, an approximately perfect state. During the earlier stages of caries of the teeth the constitutional effects are slight and perhaps transitory, though in a delicate child the pain on attempts at mastication may lead to a refusal to take any but the softest food which might possibly not be without its permanent effect. But caries is, almost without an exception, progressive—not only leading to exposure of the pulp in a particular tooth, but spreading to other teeth, including those of the permanent series, owing to the acids formed by the decomposition of the food which collects in the cavities of decay. Moreover, although the vessels of the pulps of the temporary teeth do not become so quickly plugged, owing to the larger size of the apical foramina, as they do in permanent teeth, yet the septic inflammation which must necessarily ensue when the pulps are exposed will inevitably in time cause their death. The septic condition of the mouth now becomes worse, for to the previous factors there are added the breaking up of the gangrenous pulps and the collection of food in the pulp canals, where it remains free to decompose, unreached by the tongue or the ordinary cleansing processes, whether of the brush or the mastication of food or the drinking of fluid. Moreover, either by the direct spread of the inflammation or by the forcing of virulent septic organisms through the apical foramen, by the piston action of a plug of food forced into the tooth cavity, acute inflammation in the surrounding tissues may directly follow. But even supposing this may fortunately not happen the periosteum of such a tooth is almost always chronically inflamed, as is frequently seen when it is removed. Certainly so long as the pulp is not exposed, probably so long as an exposure does not lead to any extensive disease of it, no germs or germ products will be absorbed into the blood stream, but when the pulp is dead this inevitably happens to a greater or less degree.

The extremely foul condition of the mouth is readily apparent at the slightest glance, and I have been struck with the fact that in almost every case of ulcerative stomatitis which I have seen this condition of the mouth has been present and was, in my opinion, at least the predisposing cause. So, too, necrosis of the jaws as a direct sequel of abscesses under temporary teeth is quite common, especially in the neglected children of the poor. This is more frequently limited in extent, but it may be extensive. Thus in a case which I have recorded the sequestrium included the whole of one side of the mandible, including the coronoid and condylar processes. These conditions, though obviously not without their constitutional influence, are happily chiefly local in their effects and transitory in character, but sometimes these are permanent. Thus, in the case alluded to the boy enters on life handicapped by the loss of half of his entire dentition as the result of neglect of a temporary tooth. Apart, however, from these more or less local conditions the septic condition of the mouth has a marked influence in producing disease in other parts of the body. Take, for instance, the lymphatic system. Diseased teeth are universally recognised as one of the main factors in causing enlargement of the cervical glands and these again in turn are known to afford a nidus for the growth of tubercle germs whence they may spread through the whole body. The spread of tuberculosis is now occupying many minds, but hope rather fastens on preventative than on curative measures. Is it not important, therefore, that predisposing causes should be eliminated, and with these diseased temporary teeth must certainly take rank.

Again, the septic condition of the mouth is an exciting cause of diseases of the alimentary track. It is appalling to contemplate the mass of septic material which must in the course of a short time pass from the mouth into the stomachs of those numerous little ones of whose temporary teeth scarcely one is free from caries. The part played by a septic mouth in connexion with gastric troubles of adult life has long been known, but has lately been more prominently brought into notice by recent writing. Surely in children the effect must be equally great.

It would be possible to enlarge on this question very considerably—to mention other diseases, such as reflex nervous disorders, and to show by statistics how prevalent are carious teeth not only in the poor but in the rich, but I will now attempt to show, by considering the part played by the deciduous dentition in the health of the child, that the remedy for diseases caused by these teeth is not their extraction when carious, but rather the prevention of caries and the treatment of carious cavities while they are yet small.

The teeth in the deciduous set are functionally active between the ages of two and 10 years. Before the age of

[5] Lectures on Children's Diseases.
[6] American Journal of the Medical Sciences, 1895.
[1] A paper read before the Harveian Society on May 2nd, 1901.

two years, though some are in place, the diet of the child is usually such as to require little mastication. Between the ages of seven and nine years the temporary incisors will have been exchanged for those of the permanent series, but these are only of secondary importance in the mastication of food. It is true that at about the age of seven years the deciduous molars will have been reinforced by the first molars of the permanent series, but these teeth, from the point of view which I wish to present to you, might even be considered as being for the time members of the temporary series. So that for this period of eight years the important part which the mastication of food plays in the nutrition of the child may be taken to be dependent on the temporary teeth. During the next two years the temporary molars are exchanged for their permanent successors; nevertheless, this is usually accomplished with but little impairment of the grinding surface available, for the first permanent premolars usually antagonise and are in use before the second temporary molars are lost. A little later than 12 years of age the second permanent molars erupt and thenceforward the child has available the full permanent dentition, excepting the wisdom teeth, the arrival of which is too erratic to enter into calculation.

If now the growth of the child during the period from two to 10 years of age be compared with that during a like period of eight years, from 10 to 18 years of age, the absolute need of the child having proper nourishment would seem to be strikingly manifest. Thus according to the report of the Anthropometric Committee published in 1883 during the first period the average male child increases in height 18 inches and a female child 18¼ inches; during the second period the male child grows 15½ inches and the female child 10½ inches. These figures give the ratio of the two periods for the male child as 75 are to 61, and for the female child as 75 are to 42. Thus the period of most active growth of the bones is coincident with the functional activity of the deciduous teeth. If they are diseased or if they are removed, as is often most unnecessarily done, must not this be fatal to the proper nourishment of the child? The strain on the tissues during this period of growth would seem to be emphasised by the comparatively slight increase in weight of the child during the first period as compared with that during the second period. Thus, the above-mentioned tables give for the male child an increase of 2 stones 7 pounds for the first period and of 5 stones for the second period, whilst the female child increases 2 stones 8½ pounds in the first and 4 stones 3 pounds in the second period.

Without wishing to endeavour to prove too much by statistics, which someone has described as lies in the superlative degree, the fact that during the first period a female child growing 18¼ inches only increases in weight by 36½ pounds, whilst when growing 10½ inches in the second period she gains 59 pounds, would justify the inference that her nutrition during the first period was not in excess of her absolute need.

The importance of teeth is happily receiving more attention than was formerly the case. Recently a committee of the British Medical Association was appointed to inquire into causes of the prevalence of carious teeth. It was suggested by Mr. J. Cantlie, who moved the appointment of this committee, that something was radically wrong with the method of feeding children. Now whatever effect this might have on the permanent teeth the influence on the temporary ones, which alone I am considering, would be but slight, for the crowns of these teeth are already formed at birth and subsequent feeding, &c., could have little influence except on the outermost layers of enamel which remain to be deposited. It follows, therefore, that if these teeth are so to be formed that they will present no defects and will hence not become carious the habits and dietary of the mother, indeed of the whole community, must be radically changed. This may not be impossible, perhaps, but it is improbable. Hence it is important that the means at hand for preserving these organs should be taken advantage of. First and foremost the teeth should be cleaned regularly and thoroughly twice a day, nor can this be begun too early; if an infant has only one tooth that tooth will be the better for cleaning. Secondly, they should be periodically inspected and small holes when present should be filled. A child who has not suffered the pity of a misguided parent has no dread of the process, and this for small cavities is painless.

Though the means of prevention are thus in normal cases simple and easy we cannot, I fear, hope to see their adoption in the case of the children of the poor until we can convince school authorities that dirty teeth are more to be objected to than many other things, say, ink-spots on the fingers which are so hateful to the scholastic mind.

By a consideration of the effects of the teeth when diseased and of the importance of the teeth in the normal physiological growth of the child I have endeavoured to make good the argument that "the deciduous dentition is an important factor in the health of the child."

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TUBERCULOSIS OF THE CHOROID.[1]

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EVERY practical physician is aware that tubercle may now and then be found in the choroid of patients suffering from acute miliary tuberculosis. The diagnostic importance of these small bodies has been touched upon by all systematic writers. There is, however, no general agreement either as to the ophthalmoscopic forms which they may assume or as to the precise conditions under which they may occur. These omissions are doubtless due, first, to the technical difficulties attending an ophthalmoscopic examination of a young child with such a serious disorder as tuberculous meningitis, and, secondly, to the fact that a single observer, be he physician or be he ophthalmic surgeon, is scarcely likely to come across many cases of choroidal tubercle. It is our present intention to record our personal experience of tubercle of the choroid, and in doing so we shall purposely limit our remarks to what we have ourselves observed.

The following observations are based upon the study of 49 cases of tubercle of the choroid. They may be grouped as they were met with clinically in (1) acute miliary tuberculosis and tuberculous meningitis; (2) chronic tuberculosis, medical and surgical; and (3) obsolescent tuberculosis.

1. ACUTE MILIARY TUBERCULOSIS AND TUBERCULOUS MENINGITIS.

Out of 42[2] unselected cases of these diseases which we examined with the ophthalmoscope we found 21 with tubercles of the choroid, or exactly 50 per cent. In 13 of these cases tubercle was recognised in one eye only, and in both eyes in the remaining eight cases. This gives a total of 29 eyes (13 single and eight bilateral) in which the changes of tuberculosis were detected. In 18 of the eyes the lesion was solitary in the sense that it consisted of a single tuberculous deposit. In the remaining 11 eyes the number of separate lesions ranged from as few as 2 to as many as 12; but we desire to emphasise the fact that the common number was merely two or three. The tubercles usually took the form of round, oval, or reniform areas, of a fawn, grey, or paper-white colour. Their edges, which are perhaps best described as "moth-eaten" in appearance, were generally marked by a narrow zone of darker colour, due (as our microscopical specimens show) to local aggregation and proliferation of the retinal pigmented epithelium. The amount of pigmentation appeared to bear some relationship to the size of the tubercles, since it was generally absent from the smaller nodules, so that the latter could not well be distinguished by their ophthalmoscopic characters from any other choroidal exudation, such as may be met with in syphilis, acquired or inherited. Flecks, dots, or rings of pigment, doubtless of retinal origin, were occasionally to be seen upon the surface of the nodule itself. One of the tubercles was bounded by a pigmented ring with a halo outside it of scattered granules of dark pigment on a grey ground. It is important to note, however, that the tuberculous nodules were never framed, as it were, by a thick border of pigment, such as is commonly present in the

[1] A paper read at the provincial meeting of the Society for the Study of Disease in Children at Liverpool, June 28th, 1901.

[2] Of 36 cases of general tuberculosis, all except six of which were verified by necropsy, 26 had head symptoms. There were six cases of tuberculous meningitis, four of which were verified at the post-mortem examination. Of the total number of cases (42) 16 developed optic papillitis.

lesions of an ordinary disseminated choroiditis from syphilis. In one case we found a pink streak running in the long axis of the tubercle, and in another a spot of similar colour in the centre of the little mass. These we take to be dilated choroidal vessels, such as we have found (stuffed with red corpuscles) to be present in some of our microscopical specimens. In three cases the tubercle assumed the rather unusual form of a small, oval, granular, pigmented mass situated near the optic disc. In one instance a paper-white tubercle was surrounded by a pale red ring, presumably due to congestion of the neighbouring choroid. The centre of some of the tubercles was marked by a tiny, white, shimmering dot, difficult to describe exactly in words. The retinal vessels when in immediate relationship to the tubercle (as they often were) passed over the nodule without loss of definition, as would be expected from the position of the lesion—namely, in the parenchyma of the choroid coat. In one case only was the slightest alteration noted in the neighbouring retinal vessels, which presented an ill-defined muddy appearance, possibly due to localised œdema of the retina. In eyes where the choroidal vessels were unusually distinct these were seen to terminate abruptly at the edge of the tuberculous lesion. Judging by the position of the retinal vessels the tubercles were seldom much raised above the level of the retina. With regard to the size, the tubercules ranged from a fraction of a millimetre to three millimetres in diameter, and it was exceptional for them to equal the optic disc in magnitude. Practically speaking, they were found only in the immediate vicinity of the optic disc and the macula lutea—that is to say, in the so-called "central region" of the fundus oculi. A peripheral distribution was noted only in cases where the tubercles were numerous with one exception. In a few instances the nodules lay exactly at the macula lutea. Thus, a small but definite tubercle was found in that position in one eye of a child, aged five years, whose second eye showed several small growths disseminated through the choroid. The patient died from acute miliary tuberculosis 10 days after the discovery of the choroidal lesion, and the nature of the ocular growth was confirmed both pathologically and bacteriologically. In another child, aged five years, a tubercle was found at each macula lutea. A third case was so unusual as to merit a few words of separate mention. A rickety boy, aged two years and five months, suffered from whooping-cough, bronchitis, and an enlarged spleen. In the macula lutea of the left eye was a raised quadrangular mass about eight times the size of the optic disc, of a dirty grey colour and with an ill-defined margin. The retinal pigment was distributed irregularly over its surface. Those retinal vessels which crossed the area were blurred owing, we presume, to œdema of the retina which had been detached by the underlying tubercle. The child succumbed to general tuberculosis six weeks after the eyes were examined and at the necropsy a large grey tubercle was found at the macula lutea.

There is an impression that tubercles of the choroid, visible with the ophthalmoscope, may appear in the course of a few days or hours. The only evidence which we possess on this point was furnished by a child, aged five years, with coarctation of the aorta, whose fundus oculi was examined with negative results on June 10th, 1895. Nine days later, however, a further investigation revealed the presence of three small tubercles near the optic disc of the right eye. A statement which apparently rests on the authority of Cohnheim has been made that choroidal changes are commoner in tubercle without than with meningitis. Our present figures lend no support to this generalisation, as may be seen on referring to Note 2. Is tubercle of the choroid a late symptom? We find that the period elapsing between discovery of the ocular changes and death ranged in 14 fatal cases from one to 43 days. We conclude, therefore, that it is not necessarily a late symptom of general tuberculosis. The following case, indeed, shows that choroidal tubercle may be an early sign. A boy, aged three years, with cervical caries was examined on April 24th, 1890, and was found to have a solitary tubercle near the yellow spot of the right eye. He developed whooping-cough in the early part of 1891 and died from general tuberculosis (confirmed post-mortem) at the end of April in the same year.

From the foregoing remarks it will be obvious that in acute miliary tuberculosis and tuberculous meningitis choroidal tubercle may assume several different forms. It is important to remember that in a majority of the cases the lesion in the choroid is small, single, and limited to one eye. This emphasises the somewhat obvious fact that both eyes must, as a matter of routine, be examined before the absence of choroidal tubercle can be affirmed.[3]

Our figures prove that choroidal changes are frequently present in acute tuberculosis. Indeed, in our opinion, they form perhaps the most trustworthy sign of that disorder, the diagnosis of which, as we all recognise, is often most obscure. Attention is sometimes drawn to a discrepancy between the alleged infrequency of the ophthalmoscopic discoveries, on the one hand, and the frequency of the pathological findings, on the other. Admitting the truth of this view, which, in the light of our present figures, we do with some little hesitation, there are several points to be borne in mind. Tubercle, although present, may lie in the anterior portions of the choroid coat beyond the range of the ophthalmoscope, as we have ourselves found. If the nodule is not large enough to cause disturbance of the over-lying retinal pigmented epithelium it can scarcely be visible with the ophthalmoscope, although it may be found on post-mortem inspection when the retina is removed. It seems likely that the rapid appearance of fresh tubercles mentioned by many writers is to be explained by an acute disintegration of the pigmented epithelium rather than by a presumed unusually sudden appearance and rapid growth of the nodules themselves. Then there remains, last but not least, the personal factor which is certainly not without influence when it comes to examining the eyes of a young and troublesome child with the ophthalmoscope. In short, we repeat that careful ophthalmoscopic examination will show tubercle of the choroid to be quite common in acute miliary tuberculosis, since it was present in 50 per cent. of our cases.

2. CHRONIC TUBERCULOSIS, MEDICAL AND SURGICAL.

We have examined with the ophthalmoscope 119 cases of chronic tuberculosis in children whose ages ranged from eight months to 16 years. They suffered from such various affections as tuberculous joints, chronic tuberculous adenitis, spinal caries, chronic tuberculous cerebral tumour (two cases), and lupus. Amongst them we found choroidal changes in no fewer than 11, or 9·24 per cent., of which three were verified post mortem. The choroidal lesions fell into four groups—viz., (1) the solitary, (2) the multiple, (3) the disseminated, and (4) the diffused. As the solitary and the multiple closely resemble those already described in acute tuberculosis they need not be further particularised. The case of disseminated tubercle of the choroid occurred in a stunted lad, aged 12 years, with extensive scrofulodermia and chronically enlarged cervical glands. He showed absolutely no signs of hereditary syphilis. Both eyes presented a condition indistinguishable from choroiditis disseminata syphilitica. The evidence, however, pointed clearly in the direction of a tuberculous and not a specific origin for the choroidal mischief. The case of diffused tubercle was in some respects even more remarkable. A boy, aged six years and seven months, came under our notice on April 21st, 1901. His right eye had been "blind" for about 18 months and he had suffered from tuberculous arthritis for about eight months. There was no family history of phthisis, but a lodger with that disease had lived in his parent's house before the onset of the eye trouble. We found the lad suffering from tuberculous arthritis of the right knee and slight chronic enlargement of the cervical glands. There was no evidence whatever of syphilis. The fundus of the right eye manifested extensive changes. There were visible large areas of detached retina probably caused by gross masses of tubercle in the choroid. Glistening white smaller patches (which resembled roughly those of albuminuric retinitis) possibly represented tubercle of the deeper layers of the retina. In rare cases diffused tubercle may assume even greater dimensions. A youth, aged 16 years, gave a family history of phthisis on his mother's side. He himself suffered from a cough and presented signs of tubercle at one apex. His right eye was blind and painful. The cornea was diffusely hazy. The tension of the globe was raised. No reflex could be obtained from the fundus. The eye was excised as probably containing a tumour of tuberculous nature. Upon examination the vitreous chamber was found to be filled with a greyish solid exudation, with a lenticular-shaped hæmorrhage at one part. Microscopically the

[3] We may add that in our experience the best way is, first, to scrutinise the fundus oculi by the indirect method for the purpose of discovering the lesions, and then, having found them, to work out their exact details by the direct method. A pupil dilated with euphthalmine or some other mydriatic agent is almost indispensable for the average observer and a great help even to an expert.

exudation was found to consist of caseous material staining very imperfectly. Bacilli were not looked for. Such a case as this in a child under three years of age would be difficult or impossible to distinguish from glioma of the retina.

Finally, we quote one case to show the diagnostic value which may attach to the discovery of these choroidal changes. A boy, aged four years, was brought to the hospital with paresis of his right side and especially of his right leg. There was double optic atrophy, and in one eye a small paper-white tubercle was found close to the optic disc. The provisional diagnosis of a tuberculous cerebral tumour was made. The child soon afterwards developed Jacksonian epileptiform convulsions, became comatose, and died from exhaustion. A large tuberculous tumour was found to occupy the upper two frontal convolutions on the left side of the brain and to press upon the ascending frontal convolution. We venture to think that a positive diagnosis could not have been reached in this case had a choroidal tubercle not been discovered.

3. OBSOLESCENT TUBERCLE.

In examining eyes systematically one sometimes comes across unsuspected changes of a coarse character which are far more likely to be due to quiescent tubercle than to anything else. In the absence of a pathological examination it is, of course, impossible to be dogmatic on the point, but the family history and the physical examination of the cases render such an explanation something more than merely probable. We have notes of 16 such cases, of which one or two of the more typical may be briefly cited. In the first case which we quote a boy, four years of age, had chronically enlarged glands, a thickened upper lip, and running and excoriated nostrils. There was a family history of phthisis. A quadrangular area, somewhat larger than the optic disc, was present in the macular region of the left eye. Its colour was lighter than that of the surrounding fundus. The centre of the figure was marked by a small mass of pigment, and this was encircled at some distance by a pigmentary ring, the intervening area having a greenish-grey hue. The periphery of the patch showed here and there slight accumulations of pigment. Several retinal vessels crossed the patch without being in the least involved. The only change observed during the six years that the lad remained under observation was a gradual increase in the density of the central pigmented ring. In another case a boy, aged four years, presented in the central region of the left fundus oculi an oval patch nearly as large as the optic disc. Its appearance was something like that of the case last mentioned. The child had enlarged cervical glands, but unfortunately his family history was unknown. In a striking case we met with the patient was a woman, aged 51 years, who gave a strong family history of phthisis. She had herself been treated at the Brompton Hospital for her chest some 30 years before coming under our notice. Lying near the inner side of the left optic disc was a circular area, half as large again as the optic papilla. It showed exposed choroidal vessels and was bordered by pigment. A number of tiny fawn-coloured spots—all, with one exception, devoid of pigment—were scattered about the fundus near the main lesion and the optic disc, and doubtless these represented satellite tubercles which had also become quiescent. A fine film was present in the vitreous tumour, but sight was normal. We have notes of 13 other cases, but we will merely say that the essential ophthalmoscopic characters of obsolescent tubercles in the choroid appear to us to be (1) their central position in the fundus oculi; (2) their large size and presence in one eye alone; (3) their characters—namely, a central atrophic area, inclosed by a pigmented figure, and often surrounded by a zone of altered choroid; and (4) the fact that they are sometimes associated with tiny atrophic spots in their vicinity, doubtless representing their former satellites. That they may assist diagnosis in some doubtful cases is shown by the case of a girl, aged 10½ years, who was seen on July 27th, 1886, with the history that she was healthy until two years of age when she developed convulsions which were succeeded by hemiplegia. Her father had died from phthisis. She had been treated at a children's hospital for "infantile paralysis." Upon examination she was found to have left hemiplegia and increased patellar and elbow jerks, but no facial paralysis. In her left eye was a patch of what appeared to be obsolescent tubercle of the choroid. This latter observation threw some light upon the nature of the lesion, and rendered it probable that the hemiplegia was due to a localised tuberculous growth in the brain.

SUMMARY.

1. Tubercle of the choroid may be met with in any form of tuberculosis, whether acute, chronic, or obsolescent. 2. It is common in acute miliary tuberculosis and tuberculous meningitis, since it was present in 50 per cent. of our cases. As a rule the lesion was of small size, solitary, and limited to a single eye. 3. It is far more frequent in chronic tuberculosis than is generally supposed. It was present in 9·24 per cent. of our cases. The tubercle in this form of disease may be single, multiple, disseminated, or diffused. In very rare instances it may attain great dimensions and eventually even perforate the tunics of the eyeball. 4. It is present in a certain number of cases of quiescent tuberculosis. It then generally takes the form of a large more or less pigmented area situated in or about the central region of the fundus oculi, with or without satellites.

NOTES ON SOME SURGICAL CASES TREATED IN THE GENERAL HOSPITAL AT SPRINGFONTEIN.[1]

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CASE 1. *Gunshot wound of the head; trephining.*—A trooper in Nesbitt's Horse, aged 19 years, was wounded near Phillipolis, O.R.C., on Oct. 22nd, 1900, at a range of 100 yards. When hit he was standing but fell in a minute or so; he then spoke a few words and was taken to an hotel where he remained in a semi-conscious state till the 25th. He then got up, dressed himself, spoke sensibly, and was taken in an ambulance to No. 12 General Hospital, Springfontein, a distance of 28 miles. During the journey he had fits which occurred about every 20 minutes, but was conscious in the interval. His condition on the 27th when he arrived at Springfontein was as follows. There was an entrance wound, apparently caused by a Mauser bullet, an inch posterior to a vertical line drawn from the apex of the left mastoid process to the centre of the fronto-occipital line and four inches above the mastoid apex. There was an exit wound three inches above the occipital protuberance and one inch to the left of the median line. The distance between the two wounds was two and a half inches and the scalp was not divided; no bare bone could be detected or fracture made out with a probe. He had complete motor paralysis of the right arm and leg and partial paralysis of the right side of the face. The knee-jerk was much exaggerated on the right side; it was normal on the left. He had motor aphasia; when asked a question he answered it, but not correctly. He had Jacksonian seizures commencing in the right side of the face and extending to the right arm and leg; they were very severe, lasting about three minutes. On the 28th he had six seizures; on the 29th, 30th, and 31st he had 10, 50, and 27 seizures respectively. On Nov. 1st operation was performed. Under chloroform the scalp was divided between the wounds and a vertical incision was made at the entrance wound three inches long. The periosteum was found to be intact and no fracture was visible. With a trephine a disc of bone was removed from beneath the entrance wound and this opening in the skull was enlarged upwards and forwards with Hoffman's gouge forceps. The dura mater was of a shining bluish colour, evidently from subdural clot. The dura was incised in a T-shaped manner and dark blood-clot at once protruded. It measured about two ounces and was cleared away. It came principally from the upper and anterior parts around the opening. The parts were well cleaned and the dura mater was closed with fine silk except at the centre of the T-shaped incision which was left open for drainage. A small drainage-tube was placed with one end over the opening in the dura mater and the other brought out to the most dependent part of the scalp incision. The scalp was united by silkworm gut and cyanide gauze dressings were applied. The patient slept for five hours after the operation and woke quite conscious, when it was found that he could move both the right arm and leg and he asked for food. On Nov. 2nd he had two seizures (Jacksonian). On Nov. 3rd he had six seizures; the wound was dressed and the tube was removed, cleaned, and

[1] We are enabled to publish these interesting cases through the courtesy of the Director-General of the Army Medical Service.

replaced. About 8 P.M. he became very violent, having had little sleep for the past 24 hours, and chloroform was administered to him to induce sleep, which it did, and he slept soundly for eight hours, waking up perfectly conscious and rested. From this time he had no more seizures and made an uninterrupted recovery. The tube was removed on the eighth day and not replaced and the wound healed up without any further trouble. The power gradually returned to the right arm and leg and the face became normal. On Nov. 13th he was allowed to sit up and soon regained both his former appearance and strength. On Nov. 20th he was walking about and had full use of his limbs; the knee-jerks on both sides were normal and his cerebral power was as before the injury. There was a slight depression over the trephine hole and there was visible brain pulsation. He was discharged from hospital on Dec. 20th to proceed to his relatives at Port Elizabeth for two months' furlough.

CASE 2. *Gunshot wound of the head; trephining.*—A private in the 9th Lancers, aged 23 years, service four years, was wounded near Dewetsdorp, O.R.C., on April 16th, 1901, when lying down. He was rendered insensible for 10 minutes but then recovered consciousness and found that he could not move his right arm. On arriving at No. 12 General Hospital, Springfontein, on the 18th his condition was as follows. He was quite sensible; he had complete paralysis, motor and sensory, of the right upper limb; both legs were intact and with normal jerks; both sides of the face were normal; he protruded the tongue straight; there was no ptosis; hearing and vision were normal. His temperature was normal; he had slight headache. He had a ragged scalp wound over the left parietal eminence two and a half inches in length, running horizontally over the centre of the Rolandic area. The bone was not bare and no fracture could be detected. The wound was two and a half inches from the inter-parietal or sagittal suture. No change occurred in his condition on the 19th, 20th, and 21st. Operation was performed on April 22nd under chloroform. An incision through the scalp and periosteum three inches long at right angles and crossing the centre of the original wound was made. The scalp and periosteum were reflected and the trephine was applied over the parietal eminence. A disc of bone was removed and a small hæmorrhage was found over the dura mater. The dura mater was divided by a T-shaped incision after the hole was enlarged backwards and forwards by Hoffman's gouge forceps. Fairly large dark clot, about four drachms, was found beneath. No fracture of either table could be found. The clot was removed with forceps and swabs. The dura mater was brought together with fine silk interrupted sutures except at the centre of the T with Hagedorn's curved needle and holder. A small drainage-tube was inserted, emerging from the most dependent angle, and the flaps were sutured together with silkworm gut. Gauze dressings were applied. On recovering from the chloroform he could move his right arm and had sensation in it. On the 23rd the arm could be moved well and he had complete feeling in it; the dressings were changed and the tube was shortened. On the 24th the tube was removed; the wound was perfectly aseptic; the temperature was normal. The patient slept well. The wound was dressed on the 26th and was doing well. All the stitches were removed on the 28th and the wound was closed except at one point. The wound was soundly healed on May 4th. No brain pulsation could be detected beneath the scar and the power in his arm had much improved. He was allowed to be up. He made a complete recovery and regained full power in the arm.

CASE 3. *Gunshot wound of the spine; laminectomy.*—A sergeant of the 1st South Lancashire Regiment was wounded at Knilfontein on Oct. 26th, 1900, and was admitted into No. 12 General Hospital, Springfontein, on the same date. On admission he had complete paralysis, motor and sensory, of both legs. The loss of sensation extended up to the level of the fifth ribs; respiration was almost entirely diaphragmatic. He had priapism, retention of urine, and incontinence of fæces. The knee-jerks were absent in both legs. He had an entrance bullet wound, probably caused by a Mauser, one inch to the right of the mid-sternum in the first intercostal space and an exit wound half an inch to the right of the fifth dorsal spine. His condition remained unchanged for some days, and as the direction of the wound was slightly to the right of the median line operative treatment was considered advisable. Operation under chloroform was performed on Nov. 10th. An incision four and a half inches long was made in the middle line over the fourth, fifth, and sixth dorsal spines, and the spinal muscles were detached on both sides from the spines and laminæ. Three spinous processes were removed with cutting bone forceps. The lamina of the fifth dorsal was found to be fractured and pierced by the bullet. The trephine was applied over it and a disc of bone was removed, also some loose pieces of bone. The dura mater had a small hole in it and the cord was pierced underneath. No blood-clot was found or any trace of pus. The wound was closed with interrupted catgut sutures and again the dressings were applied. No improvement occurred in the man's condition. Bedsores had developed over the sacrum and his lungs were filled with mucous secretion. He died rather suddenly on Nov. 12th from cessation of respiration. Post-mortem examination revealed a wound of the apex of the right lung, some hæmothorax (about six ounces), and pus and mucus in the bronchial tubes. A hole was found in the right side of the body of the fifth dorsal vertebra and a director passed easily through it and the spinal cord to the trephine opening in the lamina.

CASE 4. *Gunshot wound of the right leg; amputation.*—A trooper in Nesbitt's Horse was wounded at Phillipolis, O.R.C., on Oct. 22nd, 1900, and was admitted into No. 12 General Hospital, Springfontein, on the 27th. The entrance wound was one inch below and outside the lower border of the right patella, extending downwards and inwards through the head of the tibia into a large cavity between the two bones of the leg. The bullet was lodged, there being no exit. His temperature was 102° F. and the wound was very septic. Suppuration continued with bagging of pus in the calf of the leg. Alarming secondary hæmorrhage occurred on the night of Nov. 3rd, and under chloroform the entrance wound was enlarged downwards into a large cavity in front and behind the inter-osseous membrane. The anterior tibial artery was secured by ligature but profuse bleeding continued from behind the inter-osseous membrane, consequently amputation through the lower third of the thigh was performed, as the knee-joint was full of fluid which was found to contain pus at the operation. Amputation was performed after Carden's method above the synovial cavity with a long oval anterior flap, the hamstring muscles being divided transversely and the patella removed. The temperature remained normal for 48 hours and then went up to 102° F. The wound was irrigated through the transverse tube and redressed. The tube was removed on the fourth day; some stitches gave way at the inner angle. Fomentations were applied for a few days and the inflammation gradually subsided. The wound took on healthy action and its edges were brought together by antiseptic adhesive plaster. The wound healed with only a cicatricial interval of half an inch between the skin edges and on Dec. 1st the man was up. He was transferred to the base on Dec. 7th, having a sound stump. A Mauser bullet was found in the calf.

CASE 5. *Gunshot wound of the left leg; amputation.*—A private in the 9th Lancers was wounded at Phillipolis on April 12th, 1901; his horse having been shot under him, he ran on foot and tried to escape. He was admitted into No. 12 General Hospital at 4 P.M. on the 15th, having been carried in an ambulance since he was injured. The entrance wound was about the centre of the calf of the left leg in the middle line; it was small and round. The exit was through the shaft of the tibia two inches below the tuberosity; it was large, ragged, and had bone spicules protruding from it. The fibula was also broken. A pulsating swelling was present below and outside the exit wound, which could be controlled by pressure over the femoral artery. Secondary hæmorrhage from the exit wound occurred at 5 A.M. on the 19th, and operation under chloroform at once was decided upon. Bleeding was controlled by tourniquet and the anterior wound was enlarged up and down. An immense sac full of clot was found in front of the inter-osseous membrane, communicating with a similar one behind in the calf. Both tibia and fibula were shattered for about four inches. Bleeding from the anterior tibial artery was controlled, but that from the posterior tibial could not be got at owing to the small space between the bones. A Carden's amputation was then performed, leaving a good long anterior flap. The tissues on the outer side of the knee were much bruised and œdematous. A transverse tube was placed in the wound. The amputated leg was examined and both tibial arteries were found divided and more than 20 pieces of comminuted bone were present. The knee-joint was not opened into. The stump was dressed on the 21st; there was very little oozing and the wound was quite aseptic. The temperature was normal. The tube was removed on Oct. 22nd, 1900. One

stitch gave way at the outer angle where the tissues were found damaged at the time of operation. The dressings were changed daily, the discharge being very slight, and the wound finally healed without any trouble. The stump was well covered and sound.

CASE 6. *Strangulated hernia; herniotomy; radical cure.*—A sergeant in the chief's bodyguard, aged 40 years, had had a right inguinal hernia for many years which he kept supported by means of a truss. He found on Dec. 4th, 1900, when at Bethulie, that he could not reduce it and suffered from pain. He was admitted into No. 12 General Hospital, Springfontein, on the 7th, and as it could not be returned by taxis operation was performed under chloroform on the 8th. The bowels had been completely obstructed since the 4th. An incision four inches long over the ring and neck of the sac was made and the tissues divided on a director; the neck of the sac was reached and the sac was opened; the finger was introduced upwards and the constricting neck was divided with a herniotome. The gut was much congested and collapsed but was considered fit to be returned, which it was at once. The whole sac was then separated from the cord and tied high up at its neck with twisted gut ligature; the part below the ligature was cut off and removed. The lower border of the internal oblique muscle was then stitched to the back of Poupart's ligament, the cord being brought out at the internal abdominal ring. The external oblique muscle, which had previously been slit up to allow of the neck of the hernial sac being divided, was then brought together by interrupted silk sutures, the cord also being brought through it over the internal abdominal ring. The cord then lay between the external oblique and skin which was united by horse-hair. Cyanide dressings, wool, and a double spica were applied. The patient passed flatus per anum on the evening of the operation. His temperature never went above normal. The skin stitches were removed at the eighth day (first dressing) and complete union had occurred. The bowels acted naturally on the third day after operation. The man was kept in bed for 21 days and then allowed up. There was a sound scar. There was no hernial impulse on coughing. It was a complete cure. He was discharged to his duty on Jan. 15th, 1901, having no trouble.

CASE 7. *Strangulated hernia; herniotomy; radical cure.*—A private in the 65th Company Imperial Yeomanry, aged 33 years, was admitted on May 4th, 1901, in No. 12 Garrison Hospital, Springfontein, with a strangulated right inguinal hernia which he stated came down at 1.30 the same day after his dinner; he stated that when he was a child he had some trouble in this region and wore a bandage for some time, but since then he had had no trouble from it or ever noticed any swelling in this region. On admission an elongated tumour of about the size of a large egg occupied the upper part of the scrotum on the right side; it was tympanitic and had an impulse on coughing, but could not be reduced by taxis. He had vomited many times and passed no flatus per anum since it appeared. He complained of twisting pains about the umbilicus. As the symptoms were not urgent an ice-bag was aplied. On the morning of the 5th the tumour was much smaller and by means of manipulation was slowly returned into the abdomen but without the characteristic gurgle of a successful reduction. The tumour could still be felt in the inguinal canal. He had pain, and vomiting during the day continued, and he passed no flatus. On the morning of the 6th, under chloroform, an incision similar to that for radical cure was made and after division of the fascia the tumour was found in the inguinal canal; the sac was opened and its constricted neck was divided; it contained a small knuckle of gut much congested and collapsed, but appeared capable of recovery and was at once returned into the abdomen. The sac was completely separated from the cord and its neck was tied high up at the internal ring with stout silk; it was divided below the ligature and removed. The cord was raised up and the internal oblique was united to the back of Poupart's ligament by six strong interrupted silk sutures. The external oblique was then united along its division, thus obliterating the inguinal canal completely, the cord having been brought through it opposite the internal ring. The cord then lay on the external oblique and under the skin which was united by horsehair interrupted sutures. This is the operation performed by the "Bassini-Halsted" method. Flatus passed on the evening of the 6th and vomiting and pain ceased. The bowels moved naturally on the 9th. The first change of dressings was on the 14th. The stitches were removed. The wound was quite healed. He made a complete recovery.

CASE 8. *Internal strangulation of the bowel; laparotomy; removal of a constricting band.*—A 1st Class Staff Sergeant, when playing cricket at Springfontein on Dec. 30th, 1900, felt a sudden pain in the middle of his back after delivering a ball. The pain spread to the front of the abdomen and he vomited. He was admitted to hospital and during the next four days he suffered from constipation, vomiting, and tympanitis. No flatus passed and no abdominal tumour could be made out. As the symptoms became urgent operation was performed under chloroform on Jan. 4th, 1901. A median abdominal incision six inches long from the pubes upwards was made and the abdominal cavity was opened. The hand was introduced towards the cæcum and the small intestine was drawn out and traced upwards. The withdrawal was soon stopped owing to tension and the hand again introduced towards the left iliac fossa. A thick constricting band was then found surrounding the ileum and binding it down to the brim of the pelvis on the left side. By a little manipulation this was easily broken through and most of it was removed by the scissors. It was rather friable and only semi-organised. Flatus at once passed through the obstructed spot with a marked gurgle. The intestines were washed with "boiled water" and returned without difficulty. A gauze pad was placed over the intestines and under the wound while the stitches were being introduced. Stout silk was used as the suturing material and the peritoneum, abdominal muscles, and skin were all included in the through stitches; before the last two stitches were tied at the pubic end of the wound the cyanide gauze pad placed on the intestines was withdrawn, thus leaving no blood in the abdominal cavity. Cyanide dressing, wool, and a many-tailed bandage were put on and the patient returned to bed with warm bottles around him. The patient recovered quickly from the shock, passed flatus per anum at 6 P.M. on the day of the operation, and did not vomit any more. The bowels moved naturally on Jan. 6th and the temperature never exceeded 99° F. at night. The wound was dressed on the 14th and all the stitches were removed; union was complete and without any suppuration. The action of the bowels continued normal. He was allowed up on the 25th and he made a complete recovery. He was sent to the base on Feb. 8th and is doing duty there at present date (May 11th, 1901).

CASE 9. *Inguinal hernia with atrophied and partly undescended testis; radical cure.*—A private in the Cape Medical Staff Corps, aged 22 years, was admitted to No. 12 General Hospital, Springfontein, on Feb. 20th, 1901, with a large left-sided bubonocele complicated with an atrophied, partly undescended testicle on the same side. The hernia was large and seemed to flatten out between the layers of the abdominal muscles; it could easily be returned into the abdominal cavity. The testicle at times came down into the upper part of the scrotum but usually lay in the inguinal canal just inside the external ring and was quite small and soft. He desired an operation and to retain the testis if possible. Under chloroform on March 1st a radical cure was performed; the sac was found to have a very large neck which was ligatured after transfixion with stout silk. The testis was very difficult to keep in the scrotum and its cord was much attenuated and without much vascular supply. The operation was performed after the "Bassini Halsted" method and the cord placed between the skin and external oblique. A pressure pad was placed over the occluded external abdominal ring to keep the testis from coming up out of the scrotum and the usual dressings were applied. No rise of temperature followed and the dressings were not changed till the eighth day when the testis was found to have slipped up and lay under the scar. Two stitches were cut and as the testis was quite dark in colour but aseptic it was removed through the wound by dividing its cord with a curved scissors, the wound was again closed, and dressings were re-applied. No suppuration followed and the wound gradually healed up completely and soundly. A thoroughly good result followed, as there is not the slightest attempt at a recurrence or any weakness of the abdominal wall at the site of the operation. He is since doing duty in this hospital and has had no recurrence.

CASE 10. *Inguinal hernia; radical cure.*—A private in the 16th Mounted Infantry, aged 24 years, was admitted into No. 12 General Hospital on April 15th, 1901, suffering from a large incomplete inguinal hernia which caused him much trouble in riding. The opening through which it came—viz., the internal abdominal ring—was very large. Operation under chloroform was performed on April 21st, 1901. A skin incision was made over the inguinal canal three inches long.

No sac was present, the peritoneum being quite smooth behind the internal abdominal ring, but a considerable space existed between the lower border of the "conjoined tendon" and Poupart's ligament, which was closed by seven interrupted strong silk sutures, bringing the cord out at the internal ring; the external oblique was then sutured from opposite the internal ring, where the cord was brought through, down to the spine of the pubic bone, thus obliterating the canal altogether. The skin was closed with horsehair. Cyanide dressings were employed. The temperature kept normal. The dressings were changed on the eighth day and all the skin stitches were removed. Union was complete. The patient was kept in bed for 21 days. There was no impulse on coughing or other weakness of the abdominal wall. There was a very good result. He was sent to a convalescent camp before returning to duty.

CASE 11. *Inguinal hernia; radical cure.*—A lance-corporal in the 17th Lancers, aged 25 years, was admitted to the No. 12 General Hospital suffering from a large complete left inguinal hernia which, although he wore a truss, had been giving him much trouble in riding. The opening in the external oblique admitted two fingers easily and there was a varicocele on the same side but not of large size, the veins along the cord being involved. Operation under chloroform was performed on May 3rd, 1901. The usual skin incision and division of fasciæ down to the external oblique was made which was slit up parallel to its fibres from the external ring for about two inches. The cord was then raised from its bed and its fascial coverings were removed; the sac was then separated from spermatic vessels and freed up to the internal ring; it was transfixed and ligatured as high up as possible. It was then cut below the ligature and removed. The veins of the cord being numerous and bulky were separated into two parts; the smaller bundle, ligatured above the internal ring and below near the testes, was removed with the scissors; quite enough veins were left to carry on the circulation along the spermatic artery and vas deferens. The operation was then completed according to the "Bassini Halsted method" already described and the usual dressings were applied. No rise of temperature ensued except on the night of the operation, when it rose to 100·6° F.; next morning it was normal and remained so till he recovered. The bowels were moved after a glycerine enema on the third day and his dressings were not changed till the ninth day when the wound was found thoroughly healed and the stitches were all removed from the skin.

No. 12 General Hospital, Springfontein.

LICHEN FROM A HISTOLOGICAL POINT OF VIEW.

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To all dermatologists the study of lichen is an interesting one, not only because of the obscurity of its etiology and the heated discussions that have arisen in connexion with its varieties, but also because of the number of clinical conditions lending themselves to that multiplication of qualifying terms which seem to be so dear to the expounder of the art of dermatology. Whether this latter tendency originated in the desire to keep the knowledge of cutaneous disease in the hands of a few it certainly has had that effect, and much to the discredit of dermatologists it is the branch of medicine least known and understood by the great bulk of the medical profession. That this is likely to remain so is certain unless those who have the opportunities of teaching dermatology decide to take their responsibilities seriously and to substitute for the dross of a confusing nomenclature the sound practical value of instruction in the microscopical appearances which correspond to the clinical conditions which they demonstrate. When this is more universally done we shall be spared discussions serving only the purpose of making confusion worse confounded without advancing science in the very least.

If the history of lichen be examined one finds that ever since the writing of Hippocrates, jun., it has been admitted that a lichen must be a papular disease, although from time to time a pustule seems to have been added as part of the lichenoid condition. Willan, however, recognised the condition as being only a papular one and classified lichen into the following varieties: simplex, pilaris, circumscriptus, agrius, lividus, and tropicus; to these were subsequently added hæmorrhagicus, strophulus, circinatus, gyratus, syphiliticus, spinulosus, and scrofulosus. Fortunately all these varieties have been included in other conditions and so got rid of. However, in 1860 Hebra described a disease which proved very fatal, and he called it "lichen ruber." A little later Erasmus Wilson described the condition known as lichen planus, but subsequently he came to the conclusion that the disease which he described was the same as that described by Hebra. In 1873 Tilbury Fox identified both as modifications of the same disease, and four years later Kaposi, with Hebra's consent, classified the terms "lichen ruber" and "lichen planus," and called the two diseases "lichen ruber acuminatus" and "lichen ruber planus."

It was next asserted by the French school that the pityriasis rubra pilaris described by Devergie in 1857 was the same as the lichen ruber acuminatus, and to this Kaposi seems to have agreed. Others have asserted that Hebra's original description arose from confusing the three conditions, lichen ruber acuminatus, generalised lichen planus, and pityriasis rubra pilaris, but even so this hardly accounts for the fatal cases described by Hebra as lichen ruber. It seems quite unnecessary to trouble further about these cases of Hebra; the only living link between Hebra's cases and the present is Kaposi and he has declared for the identity of lichen ruber and pityriasis rubra pilaris. In order to solve this question I commenced a research some 12 months ago, and the result of the investigation has been to convince me (1) that pityriasis rubra pilaris is different clinically and histologically in a well-marked manner from lichen; (2) that the so-called lichen rubra acuminatus and lichen ruber planus are the first two stages of a disease now known as lichen; (3) that the planus stage is always preceded by the acuminate, although often the patients do not come under observation till the planus stage is established; (4) that the disease when it becomes chronic may pass on to the hypertrophic stage or even to a higher stage still—the verrucose; (5) that clinically and histologically lichen presents four easily traceable stages of transition from the early acuminate papule to the densely thickened infiltrated patch of the verrucose condition, and they are known as (*a*) the acuminate, (*b*) the planus, (*c*) the hypertrophic, and (*d*) the verrucose; and lastly, that neither the hair follicles nor the sweat glands are primarily involved, and only become secondarily so in the third and fourth stages. It will be, perhaps, most convenient if I take the clinical and histological features of pityriasis rubra pilaris and then of each stage of lichen, so as to demonstrate in the first place and, I hope, finally that there is no ground for mixing up the two diseases, and in the second place to indicate the clinical features corresponding to each of the microscopical preparations exhibited.

PITYRIASIS RUBRA PILARIS.

Pityriasis rubra pilaris is an inflammatory papular disease involving primarily the hair follicle, accompanied by desquamation, and presenting the two varieties, the benign and the malignant.

The benign variety.—In this variety of the disease there is a minute papular eruption, in size between a pin's point and head, of a reddish-brown colour involving the hair follicles. Each papule is pierced by a hair, having a minute scale round the hair, and presenting the appearance of a black point when the hair has been broken off short; but by far the larger number of papules occur quite independently of the hair follicles. The skin all over the body becomes very dry, glazed, and tense. Great burning is complained of. The scaling is best marked on the scalp and forehead and extending down on the back of the neck and the ears is not at all, as described by some, of a seborrhœic character, being larger than the dry particles of a sicca and not in the least greasy, but of a bright shining character. There is a slight feeling of harshness. With soothing applications, such as one would apply in an acute erythematous eczema, the whole inflammation subsides, the papules being the last to disappear, the disease ultimately clearing up with a fine desquamation in from three to five weeks. Injudicious internal treatment, especially the administration of arsenic, prolongs the disease almost indefinitely. In a case which I had under my care some eight years ago I had this fact brought very forcibly home to me. After 11 weeks' treatment with Fowler's solution, during which time the patient got steadily worse, he was deprived by an accident of

his medicine for two weeks when he made marked improvement. Recurrence in this form is very usual, one patient having come to me for three years in succession, being quite free during the intervals. (Any of my former students who remember the case and who may read this article will be interested to learn that last year he escaped altogether.)

The malignant variety.—In the two cases of this form that I have had an opportunity of watching grave constitutional symptoms ushered in both. The appearance of the eruption was preceded by malaise for some weeks; in one case a rigor occurred 48 hours before the onset, the temperature running up to 104° F. The symptoms of the benign variety are intensified, the burning and tightness of the skin being the most distressing symptoms complained of, the conical papules varying in size, and with the inflamed thickened epidermis between they form large patches of a deep red colour, scaling extensively, looking in some parts like exaggerated ichthyotic patches and in others like a dermatitis exfoliativa. Individual papules show a piling up of horny material, sometimes pierced by a hair which is lustreless, twisted, bent, and often broken, the skin being harsh to the touch. The disease lasts a long time, is difficult of treatment, but yields in the end to persistent soothing local treatment and large doses of cod-liver oil internally. I can readily understand these cases corresponding to Hebra's cases of fatal lichen ruber.

CASE 1.—In the case of this patient, a man, aged 48 years, the duration of the present attack had been three weeks. The clinical characters were marked redness of the scalp, forehead, and ears, presenting a glazed appearance, the skin appearing to be tightly stretched; there was fine white desquamation. On the flexor surface of the forearms were a number of minute brownish-red conical papules, some pierced by hairs, others with the hairs broken and presenting minute black points, while the larger number of papules appeared to occur quite apart from hair follicles. Round the hairs there was a continuation upwards of the horny layer, giving the appearance of a fine sheath to hairs. There were thickening and scaling over the backs of the hands and the soles of the feet; there were also some papules seen on the backs of the fingers. The body and lower limbs were free.

Microscopical characters. (Fig. 1, Section 573, removed from the lower third of right forearm.)—There are a hypertrophy of the horny layer over the papule and a slight hypertrophy of the stratum granulosum. Under the papules may be observed a small irregular infiltration not unlike that found in the lichens. These papules are quite independent of hair follicles and correspond to what Unna calls "sinuous papules." In the hair follicles may be seen a hypertrophy of the horny layer, producing a bend in the hair, which is pushed over to the side of the follicle. The lumen of the duct and coil gland is dilated, with swollen epithelium.

Remarks.—The points which I wish to emphasise in connexion with pityriasis rubra pilaris, when taken in conjunction with lichen, are: (1) that although papules occur apart from hair follicles the hair follicles are primarily involved; (2) that in lichen the hair follicles only become secondarily involved and that at a much later stage of the disease; and (3) that there is no tendency to the formation of hyaline material, this alteration being one of the earliest signs of a lichen.

Having thus briefly disposed of pityriasis rubra pilaris, showing, however, I hope, the chief points of distinction between it and a lichen, I will pass on to the more immediate object which I had in view—namely, to show that there is one lichen with four stages, each stage after the acuminate being a direct sequence of the previous one. Not that it is necessary for the disease to go through all these stages, but that each of the stages after the first exhibits a higher type of the disease. The drawings of the microscopical slides will indicate beyond doubt the gradual passing of the early papule to the higher stages, showing a condition of transition which corresponds clinically with the duration of the disease.

LICHEN.

Lichen is an inflammatory cutaneous disease ushered in by an eruption of red conical papules, varying in size from that of a pin's head to that of a split pea, which may develop into flat, irregular, waxy papules, either remaining discrete, becoming confluent, or arranged in rings. These papules may ultimately amalgamate and form lilac-tinted patches, either hypertrophic or, in the severest form, distinctly warty. The stages of the disease are: (1) the acuminate stage; (2) the planus stage; (3) the hypertrophic stage; and (4) the verrucose stage.

The acuminate stage.—In this, the initial stage of a lichen, the papules are of about the size of a pin's head. They are of a bright-red colour with a thin scale on the top, are localised to the wrist and the insides of the knees, or are scattered universally all over the body. Itching is present and is often very intense. The inflammation may subside, the disease ending in desquamation without pigmentation, or, as it more commonly does, it may pass on to the second stage.

The planus stage.—Here the lesions may be limited, as a large quantity of eruption in the early stage does not of necessity mean that many lesions pass on to this stage. However, the typical picture presented is a very extensive universal eruption of conical papules coming out in fresh crops, mixed up with larger, flat, irregular-shaped, dark-reddish papules—which later become waxy, with a tendency to umbilication, more marked according to the age of the papules—the more polished the papule the greater the age and the greater the umbilication. The papules may occur in chains, in definite rings, or in segments. There is often an extensive amount of desquamation of very white scales present. Itching is intolerable and frequently marked redness and infiltration of the skin take place between the papules. The lesions are soft at first, but as they become more waxy they are found to be harder. On the tongue, the palate, and the insides of the cheeks may be seen pin-point red acuminate papules at first, with later white plaques or streaks. The disease may continue for weeks or months in this stage, but more commonly it yields to treatment and subsides, leaving usually only slight pigmentation if it has been untreated by arsenic.

CASE 2.—The patient was a female, aged 43 years, who had been suffering from the attack for 14 days. There was extensive eruption all over the body and the limbs, displaying acuminate papules of the size of a pin's head of a bright-red colour, some of which were "marked" and were seen in the course of from a week to a fortnight to pass on to the second stage and to present flat, irregular-shaped, dark-red papules of a typical character. There were extensive redness and infiltration between the papules, with scaliness. On the inside of the cheeks were red acuminate papules, but no white patches. Itching was severe. The disease ultimately subsided in six weeks, leaving but slight pigmentation present.

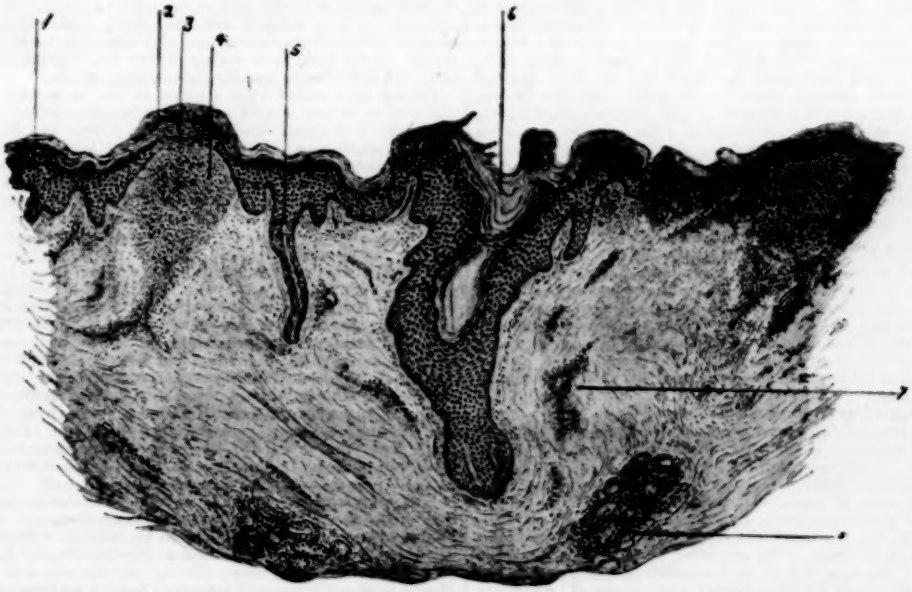
Microscopical characters. (Fig. 2, Section 429, taken from the breast.)—Here may be observed on the extreme left of the drawing (1*a*) an early acuminate papule, with the beginning typical lichen infiltration underneath. On the right (1*b*) is seen the papule as it has developed and passed into the early papule of the planus stage, showing a flatness and enlargement of epithelial cells already becoming hyaline. Here and there may be seen small hyaline pearls. The papillæ are swollen and they form the round characteristic arches, between which is a small irregular infiltration composed of a few mast cells and leucocytes and a number of small pointed cells, the whole being just under the epidermis.

A section (No. 429) (from the same case with a hair follicle beside the planus papule) was taken from the back. It was interesting to observe that the hair follicle was quite normal, the papule having arisen quite apart from it, and although the irregular infiltration was seen round the hair follicle it had maintained its integrity.

In many cases of lichen the general eruption may subside, leaving a few waxy-coloured, flat, irregular papules, itching only moderately, and the patient may not trouble till the itching becomes more intense or the papules more pronounced. Or, again, there may never have been a general eruption, but only a local one which has been followed by these planus papules, and advice is not sought for months or even for years.

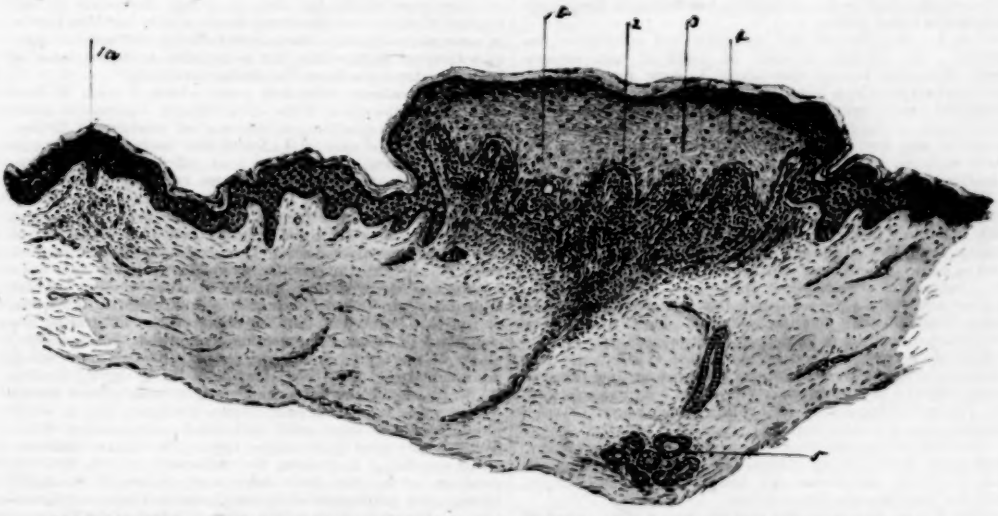
CASE 3.—The patient, a man, aged 48 years, had suffered for two years and he remembered having a small number of red, itching, pointed spots which gradually became flattened and white. There were small groups of papules occurring on the lower third of the flexor surfaces of both forearms. Some of the papules were isolated and large, of a dense consistence, waxy in colour, umbilicated and lined, and others were smaller and occurred in lines of four and five, while there was a beautifully-marked ring on the left wrist. In these papules, in lines and rings, there was a well-marked

FIG. 1 (Section 573).



Pityriasis Rubra Pilaris. 1. Stratum granulosum. 2. Horny layer over papule. 3. Flatness of epithelial cells. 4. Infiltration situated under papule. 5. Sweat duct with lumen slightly wider. 6. Hair follicle. 7. Infiltration round blood-vessels. 8. Dilatation of coil gland.

FIG. 2 (Section 429).



Lichen Acuminatus. 1a. Early commencement of a lichen, indicated by an acuminate papule (lichen acuminatus) with infiltration underneath. 1b. Further development of 1a going on to show planus papule (lichen planus). 2. Papillæ round and swollen. 3. Hyaline pearls. 4. In papule enlargement and flatness of epithelial cells, which have become hyaline. 5. Coil glands with dilated lumen of duct and gland and swollen epithelium.

lilac tinting, but in the larger there was just the faintest suspicion of it.

A section (No. 560) (waxy papule of planus stage) was taken from the right wrist. In this section could be noticed the increased thickness of the horny layer, which was becoming hyaline. The cells of the stratum granulosum had become hypertrophied and the epithelial cells were larger, flatter, and more hyaline. The hyaline pearls were larger. The sweat ducts were slightly wider than normal. The typical lichen infiltration was composed of small pointed cells, deeply stained, occurring in and round the swollen papillæ body, closely adherent to, and often in lines along, the fine vessels. The endothelial cells of the capillaries were hypertrophied and swollen; some mast cells and leucocytes were scattered about. The connective tissue cells were swollen and increased in number.

Remarks.—These three sections establish (1) the difference between pityriasis rubra pilaris and lichen; (2) the gradual transition of the initial acuminate papule to the full developed flat, umbilicated, irregular, waxy papule of the so-called lichen planus; (3) the fallacy of the evidence that the hair follicles or sweat ducts take any part in the formation of the lichen papules; (4) as a result, that the umbilication is not due or in any way connected with the coil duct; and (5) the important part played by hyaline degeneration, not only in producing its waxy appearance, but also in accounting for the lesions, which were soft at first, becoming harder later.

The hypertrophic stage.—This stage follows as the sequel to the previous ones and seems to be often due to some central irritation, so that it is found following the course of a nerve. Varicose veins in other cases seem to have helped the original trouble to further development, while in quite another class of cases it is impossible to account for the patches sometimes occurring on the forehead and at other times on the wrists except by local irritation from some article of clothing. On inquiring closely it is generally possible to get a history of the initial eruption which has subsided except for the patches complained of, which are made up of the chronic inflammation, not only of the original papules, but of a hyaline degeneration of the tissues between them. These may remain for years, gradually becoming more thickened, often resembling a keloid elevation, varying in colour from a lilac tinting to a deep red, presenting various shapes, sometimes in lines, rings, and irregular plaques, and giving rise in some cases to no discomfort but in others to more or less constant itching. White lines or points may be observed. Scales of a bright white colour are often present, chiefly adhering in the centre. These patches may occur anywhere, but are more frequently seen on the lower limbs.

CASE 4.—In this case the condition had existed for five months. The patient, a man, 54 years of age, remembered distinctly having had about a year previously an itching eruption which lasted for some months. A thickened infiltrated plaque occurred at the junction of the middle and lower thirds of the inside of the left leg, being three inches in width and five inches long. It was very dense, excessively irritable, striated, faintly lilac in colour, and it presented a well-marked irregular outline.

Microscopical characters.—Section 454. Here might be seen hair follicles and sweat ducts dilated and filled out with a hyaline horny layer, hypertrophy of the cells of the stratum granulosum, and an increase in the number of the rows of cells. There were enlarged lymph spaces, owing to the contraction of hyaline epithelium. Well-developed hyaline pearls could be seen and the coil glands with their lumen filled out with hyaline material. There was uniform infiltration extending more deeply into the cutis.

Remarks.—It was interesting to notice (1) that the hair follicles and sweat ducts were now for the first time involved to any extent; (2) the enlargement of the lymph spaces; (3) the gradual enlargement of hyaline pearls; and (4) that pigmentation was more marked.

Verrucous.—This condition has been denied by some and improperly described by others. It is a rare development and certainly, as shown by the microscopical picture, indicates the highest type of lichen.

CASE 5.—In this case the patient was a man, aged 65 years, and the condition had been present for 10 years. There was a dense, hard, infiltrated patch situated over the lumbar region, presenting numerous white lines on its surface, some almost looking like deep cracks, irregular, warty-looking on its surface, quite fixed, itching excessively, at times presenting a lilac tinting all over, sometimes deeper in colour than at other times, but at no time showing any appearance of red.

Microscopical characters (Section 69).—Here everything was in a higher state of development. There were larger cells of stratum granulosum and more rows of them, further widening of hair follicles and sweat ducts, greater development of hyaline degeneration, and larger hyaline pearls. The lymph spaces were more widely dilated and infiltration had extended more deeply into the subcutaneous tissues.

Having thus stated what appears to me to be the true position of lichen I will take some of the points that, according to a recent discussion,[1] seem to vex the dermatological mind.

Nomenclature.—I would draw attention to the statement by the opener of the discussion which I have mentioned that it was at last time to do away with the term "ruber" in dealing with lichen planus. This, I am glad to say, I have systematically done for some years in my teaching, pointing out its uselessness even at the risk of being thought unorthodox, which is the very amusing reason given for its retention by another speaker who says: "I have stuck to it for fear of not being considered orthodox." Surely orthodoxy, though very necessary in the conduct of professional life, for example, tends when imported into science to the cramping of individuality and originality and becomes absurd. The opener of the discussion, however, I regret to say, did not continue in removing useless terms, but having removed the "ruber" on the ground that "the time has come to say to it, as we did to his (Hebra's) revered shade long ago, 'Requiescat in pace,'" he proceeded to create a new name for two cases, one of which he stated was a crimson red eruption of papules *very like* lichen planus, which he calls "lichen planus erythematosus." Then, a little later, he suggested that when the papules were very waxy-looking the term "lichen planus morphœicus" would be suitable. Why this desire to introduce new terms to describe the different shades of colour which may strike the eye of the observer in a disease of many shades and colours? Does it either advance this branch of science or enhance the reputation of the sponsor? Is it not rather an element of weakness, a wasting of time over useless nothings, instead of verifying the diagnosis by microscopical investigation.

Striæ and grey points.—These pathognomonic signs of the French school are useless from a clinical point of view, because they are common to many conditions of inflammation of the skin, being always well marked where there are a thickening and hardening of the horny layer, and not being in any way influenced by the alterations in the cells of the stratum granulosum, but only in lichen dependent on the hyaline condition of the horny layer, which becomes harder in some places than in others, emphasising the normal lines and furrows of the skin just as in psoriasis the waxiness of the horny layer produces the similar condition.

Morbid anatomy.—The last point which I wish to deal with in this discussion is the extraordinary statements made by two of the speakers on the morbid anatomy of lichen. Dr. J. H. McLeod said: "We found that the initial lesion was a cellular infiltration, and that that cellular infiltration was invariably of one type. There were certainly a number of blood-cells present, but the majority of the cells clearly belonged to the connective tissue type. A few of them were of the same class as Unna's plasma cells. The majority of them were typical connective tissue cells." My comment on this is (1) that the swollen connective tissue cells have nothing to do with the infiltration, they present similar appearances in lichen to those found in other inflammations of the skin; and (2) that the cells of the infiltration are composed of small deeply-stained, somewhat pointed cells, easily distinguished from the connective tissue cells which are much larger than these tiny cells, being tightly fixed to the walls of the capillaries and often in lines. There are no plasma cells, as Dr. McLeod states, but leucocytes in small numbers, a few mast cells, and some pigmentation which becomes increased in the higher types. Dr. James Galloway, while appearing to endorse the statements of Dr. McLeod, went on to say that there were many points of similarity between the infiltration of lichen planus and lupus erythematosus. But this is certainly wrong. Any fairly accurate observer can see that there are no points of similarity either in its appearance, distribution, or in the other cells which accompany it. The whole picture of lupus erythematosus is

[1] British Journal of Dermatology, vol. xii., No. 12, December, 1900.

different, presenting characters as distinct histologically as those which clinically differentiate the two diseases. In neither case ought there to be the slightest difficulty in diagnosing between the two.

In conclusion, I hope this paper with the microscopical illustrations so well executed by Mr. Max Colhoun may serve to make the very interesting condition known as lichen more intelligible to those who may read it.

Cavendish-square, W.

INFANTILE SCURVY.

By EDMUND CAUTLEY, M.D. CANTAB.,

PHYSICIAN TO THE BELGRAVE HOSPITAL FOR CHILDREN; ASSISTANT PHYSICIAN TO THE METROPOLITAN HOSPITAL.

In view of the discussion raised in THE LANCET on the cooking of milk and its effects on nutrition the following cases of infantile scurvy which have recently come under my notice may prove of interest. Cases of this nature are far more common in private than in hospital practice. This is no doubt due to the fact that the same care is not devoted by the mother or nurse to the preparation of the child's food, and that even when fed on patent foods the child often gets in addition "tastes" of unboiled milk and other articles of diet. The children of the lower classes are rarely kept on a diet of sterilised milk or even on patent foods only for any very long time and, as these cases show, the development of scurvy is a very slow process.

CASE 1. *Scurvy due to a prolonged diet of sterilised cream and milk.*—The patient was a female, aged 10 months, living in Surrey. She was brought to me at the age of nine weeks, weighing eight pounds, just as much as when she was born. She had been fed on various kinds of diet. On a diet of cream, milk, water, sugar, and lime water, in suitable quantities and at proper intervals, she gained 73 ounces in 12 weeks and had not a single bad symptom. The food was sterilised for 20 minutes. I did not see her again for five months, during which time she had been fed on exactly the same diet, the same amount and at the same intervals, and the food had been continuously sterilised for 20 minutes. She had now general tenderness of the lower limbs, disinclination to move them, pain on movement, and some swelling of the middle of the right thigh. Two teeth were cut and the surrounding gums were swollen and rather dusky. Four more teeth were almost through. There was no evidence of rickets. The milk mixture was given boiled instead of sterilised, and in addition the child was given barley-water, fruit juice, and a little meat juice. On account of a family susceptibility to tuberculosis, two sisters having died from tuberculous meningitis, and not knowing the source of the milk-supply I did not care to run the risk of putting the child on unboiled milk. Recovery was rapid and uneventful.

CASE 2. *Scurvy due to patent foods.*—The patient was a male, aged 11 months, living at the seaside. For the first three months he was fed on a patent food advertised as suitable for an infant at that age. During the next three months he was fed on another patent food, provided by the same firm, for children at that age. At six months an attempt was made to put him on the third variety of the same firm's preparations, but his digestion was upset, and he was then fed on a malted milk. His first tooth was cut at five months. For three months he had suffered from variable pains, anorexia, and wasting. He was not anæmic. There was a moderate degree of rickets. He had seven teeth. The gums were dusky and spongy. There was general tenderness and pain on movement. On a suitable diet he recovered rapidly.

CASE 3. *Scurvy due to patent foods.*—The patient was a female, aged 11 months, living in the country. Since the age of five months she had been fed on patent foods only and seemed to thrive well, getting very fat. For a month she had been fretful, disinclined to move, and would cry on handling. For three weeks she had been treated for rheumatism. She was very fat, her limbs resembling Bologna sausages. She had seven teeth. The gums were spongy, purplish, and bled freely. The legs were kept partially flexed and she screamed when attempts were made to straighten them. There were general tenderness, pain, and inability to sleep. There was no evidence of rickets. She soon recovered.

CASE 4. *Scurvy due to sterilised milk.*—The patient was a male, aged 15 months, living in a London suburb. He had been fed on milk from a "milk laboratory" since a few months of age. Recently he had been at the seaside and had only returned the day before I saw him. He had 10 teeth, with deep purple congestion of the gums, was very anæmic, sweated freely, cried when moved, and presented general tenderness of the limbs and slight beading. There was marked swelling of the right leg and to a less extent of the right thigh and left leg. This was much the worst case of the series, but the patient recovered very rapidly.

The treatment in each case consisted in a diet of unboiled milk (except in Case 1), fruit juice, meat juice, and barley water. In the fourth case vegetable purées were also given and mashed sieved potato. All these cases occurred in infants of the upper middle class in the social scale and they had all been more or less under medical supervision. Climate does not appear to have exerted any influence, though it is possible that the healthy hygienic surroundings and a copious supply of pure air may have postponed the onset of the disease. In all cases the diet consisted of a cooked food, but the disease did not develop for many months. The first case was the mildest, although the food had been continuously sterilised for eight months and it was not necessary to stop cooking the milk in order to cure the disease. The milk was boiled for a few minutes instead of being sterilised for 20 minutes.

It strikes me as a remarkable fact that during the last seven years I have in hospital practice brought up a very large number of infants on boiled milk, with the addition of barley water after the age of two or three months, and yet during the whole of that time no one of them has developed scurvy. Many have had the milk boiled until they have reached the age of one year. The rate of gain in weight has always been satisfactory when the directions have been properly carried out. Consequently I am astonished to read in your valuable journal that a physician of one of the largest London hospitals actually states that numbers of infants "are made peevish, fretful, and even seriously ill by the pernicious effects of boiled milk on their nutrition." In large towns it is absolutely imperative that milk for infants should be boiled, though it is not so necessary that it should be sterilised. In 1895 I examined milk bought in London shops and found that it contained from 3,000,000 to 30,000,000 of micro-organisms in each teaspoonful. Surely no one can urge that such milk is better uncooked than cooked. Under the present methods of milking and distribution of milk it is quite impossible to prevent the contamination of milk and the rapid growth of micro-organisms in such a very nutrient fluid. The only means we can safely devise to minimise the risk is to cook the milk. No chemical treatment of the fluid is proved to be less harmful. It is an established fact that many epidemics have been traced to the milk-supply. Such epidemics are hardly possible from this cause if the milk is boiled, for the common disease germs are readily destroyed by the process. Many maintain that infected milk is a great cause of infantile tuberculosis, and if this is the case it still more strengthens the position of those who insist on the boiling of milk for infants.

Let us consider for a moment the arguments against cooking the milk. In the first place, it is said that it diminishes the nutrient value. Such an argument might be brought forward against many articles of food and yet would not induce us to eat the food uncooked. The experiments of Vassilieff on healthy young men showed that the nitrogenous ingredients and the fats of boiled milk are less readily assimilated than when the milk is unboiled. Koplik's observations on infants showed that the amount of unabsorbed nitrogenous constituents is practically the same whether the milk is boiled, pasteurised, or sterilised, and is greater in each case than when the milk is unboiled. Bendix came to the conclusion that, in the case of infants two years of age, the nutritive value of sterilised and unsterilised milk is practically the same. Weber's experiments on calves showed that the nutritive value of uncooked milk was greater than that of cooked milk. Though there is great liability to error in experimental work which involves very elaborate chemical processes it may fairly be concluded that the nutritive value of milk is somewhat lessened by the process of cooking. Its antiscorbutic properties are also diminished and, in my opinion, the longer the subjection of milk to a high temperature the greater the diminution in these latter properties. For this reason the proprietary foods made from milk are more likely to lead to scurvy than is a diet of boiled milk.

There is no doubt that sterilised milk as a continuous diet will in time produce scurvy. It is equally clear that such a diet must be continued for many months—eight months in Case 1 and then only a very mild form of the disease; more than a year in Case 4 and hence a more serious attack. In both these instances nothing else was given. But are we to condemn the cooking of milk for such a reason as this? I can point to a very large number of infants who have been fed on boiled milk for many months and have never developed scurvy and have gained weight as rapidly as the most anxious mother could wish. The other two cases illustrate still more strongly the disadvantages of cooked foods, especially the prolonged cooking to which the proprietary foods are subjected in order to preserve them. Even in these instances the scurvy took many months to develop and a little modification of the diet would have prevented it entirely.

In conclusion, I most strongly maintain that the boiling of milk for infants is essential, save under most exceptional surroundings; that the longer milk is cooked and the higher the temperature to which it is submitted the less will be its nutritive and antiscorbutic value; that such deterioration in its properties is of no serious importance, if it is not forgotten, for it can be very easily remedied; that any healthy infant can be brought up on a diet of boiled cow's milk, suitably diluted and mixed and given in proper quantities at due intervals; that failure to bring up infants on such a diet is rarely, if ever, due to the fact that the milk is cooked, but is due to some error in the mode of feeding or the amount given; that the very slight tendency to scurvy can be easily remedied by the addition of barley-water and a little fruit juice; and, finally, that healthy boys at a public school can drink uncooked milk with impunity as long as it is not contaminated with disease germs, but that to base on such a fact an argument that infants should be fed on unboiled milk is merely a delightful instance of illogical reasoning.

Upper Brook-street, W.

ON X RAYS IN THE TREATMENT OF LUPUS AND RODENT ULCER.

BY JAMES STARTIN, M.R.C.S. ENG.,
SENIOR SURGEON TO THE LONDON SKIN HOSPITAL.

IN September, 1899, I found the beneficial effects of the x rays in lupus, rodent ulcer, and certain other affections of the skin. I have been working with an instrument provided by Mr. Isenthal, consisting of a 15-inch sectional coil worked at 16 volts with a mercuric interrupter. The average speed of interruptions is about 250 a minute, the average current about from three to five ampères. I used at first a five-inch tube, then a smaller one made by Cox. I place the tube generally at a distance of five inches between the anti-cathode and the part to be exposed, and the duration of the exposure lasts from 10 to 15 minutes, giving four or five exposures on consecutive days. In cases of lupus the skin becomes slightly red after the first four exposures, the nodules bright and shining, and the pus dries up, with no doubt destruction of the bacteria. After a few days scabs form, then drop off, leaving a red glazed surface, which may or may not scab over again. This process goes on until no more scabs are formed and the surface is smooth and normal. The surfaces acted upon become slightly œdematous and a healthy epidermis begins to form. A good deal of reaction takes place in the diseased areas, such as we used to see on the administration of tuberculin a few years ago, but without any detrimental constitutional effects. This is followed by a copious discharge of serous matter which ceases in a few days.

Whether the x rays operate injuriously on the micro-organisms or whether phagocytosis becomes more pronounced under the slight stimulus has not yet been definitely made out. What, then, is this curative action so destructive to bacteria and what is the agent that produces it? In what manner do the ethereal vibrations of the x rays correspond to the ultra-violet, photo-chemical rays of the solar spectrum?

As far as my experience leads me at present the most suitable cases for treatment by the x rays are lupus, both true and erythematous, rodent ulcer, epithelioma, psoriasis, localised eczema, lichen, alopecia areata parasitica, and other parasitic diseases of the ringworm class. To these may be added superficial cancerous affections and dermal tuberculosis. When we can get the penetrative power to extend still further, if it be true that cultivated bacteria can be destroyed in from 15 to 20 minutes, the x rays show a future use in antiseptic surgery.

CASE 1.—The first case I wish to record is that of a man, aged about 60 years, who came under my notice in September, 1898, with a large rodent ulcer extending over the whole frontal region down to the supra-orbital and nasal region, with deep ulcerations, some extending to the periosteum, and having the distinct crateriform edge characteristic of rodent ulcer. I used various treatments by caustics, ethylate of sodium, chromic acid, salicylic collodium, powders and ointments with varied success. Nevertheless, the disease steadily advanced, so that in June, 1900, I decided to put him under the x-rays treatment and gave him his first exposure on the 18th of that month, repeating the exposure for seven consecutive days, for 15 minutes at six inches from the skin. After the first four exposures much disturbance of tissue was noticed. The skin became red and glazed, the edges red and inflamed, and a copious discharge took place. After a day or so all discharge ceased and the sore began to take on a more healthy appearance, granulation tissue beginning to form. He went home with a simple iodoform dressing and I saw him again in July. The appearance of the wound was more healthy, but still there were two large excavated ulcers of about the size of a two-shilling piece in the centre of the area. I decided to give him a few more exposures, seven, and again in October, with the result that the raised edges of the wound became flattened, granulation tissue and an apparently healthy skin forming on most of the old sites of disease.

CASE 2.—The patient was a strong man who came under my notice three years ago with a deep foul ulcer on the forehead, nose, and face near the inner angles of both eyes, covered with thick crusts and very tender and sore, caused by a wound which he had received from the branch of a tree. I put him under various treatments by caustics, ethylate of sodium and salicylic and iodoform dressings, as in the other case, with varied results, and on Oct. 22nd last I sent him into the hospital in Fitzroy-square and gave him 10 exposures to the x rays with very beneficial results. The ulcers on the forehead and nose have nearly healed and only the ulceration in the corner of the nose and right eye remains. It is difficult to direct the rays there on account of the near proximity of the eye. The sight is unaffected at present.

In both these cases there was some considerable dermatitis, which was to be expected, and we need not be afraid of it as it promotes that disintegrative resolution in the tissues which must be present in the formation of a healthy cicatrisation. The surrounding skin has also taken on a more healthy appearance. The scars that remain are more natural and resemble the surrounding skin.

CASE 3.—A girl, aged 17 years, came under my care at the hospital in May, 1890. It was one of the worst cases of true lupus that I have seen for some years, with perforation of the bridge of the nose. I commenced treating her with tonics, quinine, and arsenic and using an antiseptic dressing of salicylic acid, iodoform, and vaseline, and on June 20th I gave her seven exposures with much the same result as in the two previous cases. There was considerable disturbance in the ulcers with much discharge for a few days. Then there followed a complete drying up of the sores and the assumption of a much more healthy appearance.

CASE 4.—A young married woman, aged about 30 years, had well-marked butterfly lupus erythematosus on both cheeks and on the bridge of the nose. The patches, which were crimson red and inflamed, were of about the size of a two-shilling piece. This patient came under my care in October, 1897. I put her under treatment of various applications, salicylic collodion, &c., with some good results, but the case proved to be tedious, so I determined to put her under the x rays at intervals of three days for a few weeks on Nov. 5th last. She has now had six applications with capital results. Cicatrisation has taken place.

CASE 5.—This patient, a young woman, aged about 21 years, came under my care at the hospital in March, 1900, with psoriasis of the legs, the arms, and the body. After treatment with tonics, arsenic, and tarry preparations she got fairly well excepting one obstinate patch about six inches

long by three inches broad on the leg. I exposed her to the x rays for seven exposures at intervals of about three days, with the result that in about a fortnight from the last exposure the whole patch completely vanished, leaving a healthy skin.

In the face of such facts it must be considered that we have in the x rays a valuable therapeutic agent.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF COCAINE POISONING.

BY KENNETH FRASER, M.B., CH.B. ABERD.,
JUNIOR HOUSE SURGEON, ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

A WOMAN, aged 59 years, was admitted on March 11th, 1901, to the Royal Albert Edward Infirmary, Wigan, suffering from rodent ulcer situated above, and to the outer side of, the right orbit. She had been operated on about a year previously, when a portion of the frontal bone had been trephined. On the present occasion she was considered to be beyond operative treatment. On the 21st formalin (40 per cent.) was applied to the surface of the ulcer, causing great pain. On the 23rd, previously to the application of the formalin, the affected part was sprayed with 10 per cent. of cocaine. She was sprayed twice a day. On the evening of the 25th the patient became quiet, spoke in a dazed manner, and answered questions after some hesitation; she then became irritable, lying with her head buried in the pillow, and soon drifted into unconsciousness. The pulse was rapid, full, and of high pressure. The respirations became laboured, irregular, and of the Cheyne-Stokes character. Convulsive clonic spasms passed over the whole of the body, beginning with the muscles of the mouth. Then the patient broke out into a cold perspiration and saliva ran freely from her mouth. The face was pale. The pupils were normal in size and reacted to light. There was no change in the temperature. On artificial respiration being tried the arms could not be raised above the level of the shoulders. Brandy was administered and five minims of nitrite of amyl were given and also inhalations of oxygen. Boric fomentations were applied to the affected part half-hourly. In the course of three hours the patient regained consciousness and dropped into a peaceful slumber. The following morning she felt quite well but did not remember anything of the previous night. She had received in all about five grains of cocaine. I am indebted to Mr. Berry, under whose care the case was admitted, for permission to publish these notes.

MALIGNANT DISEASE OF THE TESTICLE IN AN INFANT.

BY H. J. CLARK, M.R.C.S. ENG., L.R.C.P. LOND.

THE following exceptionally rare case of malignant disease of the testicle in early infant life is worthy of record.

The second child of exceptionally healthy parents was born in January, 1899. At birth the testicles had descended and no abnormal condition was observed until the child was 10 weeks old, when a slight enlargement of the left testicle was observed, without, however, any apparent cause. The enlargement in the gland increased gradually until the child was 11 months old, when it had attained to the size of a small hen's egg. There was an entire absence of swelling in the inguinal or neighbouring glands. On removal the testicle weighed 29 grammes. After operation the child did well and at present looks healthy and free from any neighbouring glandular implication.

Swanage.

MEASLES AT DARTMOUTH.—At the meeting of the Dartmouth Town Council held on July 9th Mr. J. H. Harris, the medical officer of health, reported that during the recent epidemic of measles 672 cases of that disease were notified. Mr. Harris added that there was an outbreak of measles in 1895, when 672 cases were also notified.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

MILL ROAD INFIRMARY, LIVERPOOL.

A CASE OF CÆSAREAN SECTION FOR MALIGNANT DISEASE OF THE UTERUS; RECOVERY OF MOTHER AND CHILD.

(Under the care of Dr. NATHAN RAW.)

WHEN the cervix of a pregnant uterus is discovered to be extensively affected with malignant disease and the pregnancy has reached the seventh month there can hardly be any question that the most suitable treatment is a Cæsarean section followed by complete removal of the uterus, should that be possible. The mortality at the present day from Cæsarean section is low in cases in which it is performed before the onset of labour; but if the operation is not undertaken until labour has lasted for many hours the consequent exhaustion must necessarily exert a very harmful influence on the prognosis.

A woman, aged 30 years, was admitted into the Mill-road Infirmary, Liverpool, on May 10th, 1901, suffering from anæmia and pregnancy at the seventh month. Her father died from cancer of the stomach and her mother died from cancer of the breast. She had had seven children, of whom three were alive and well; the others died in infancy. During the last four months she had had repeated and constant hæmorrhages from the vagina, together with an offensive discharge. On admission she was pale, extremely anæmic, and very weak. The pulse was 100, small, and thready. She had lost flesh rapidly and suffered constantly from headache. On examination per vaginam there was extensive cancer of the cervix of a fungoid nature, evidently of rapid growth; it bled very readily and was pretty firmly bound down and fixed in the right fornix. The uterus was not very moveable and on examination through the speculum the cervix had a cauliflower appearance. She was evidently going rapidly downhill, as the bleeding recurred two or three times every day. The whole circumstances were explained to her husband and herself and they both agreed to the proposition of Cæsarean section.

On June 3rd she was placed under ether. Dr. Raw made an incision 10 inches long through the thin abdominal wall. The uterus was then approximated to the middle line and the abdominal cavity was shut off by large cotton sponges. The uterus was then opened by a long incision extending from the fundus to the lower segment. Unfortunately the placenta was attached right opposite the incision and Dr. Raw had rapidly to cut through it and to separate it from the uterine wall. It bled pretty freely, but the hæmorrhage was soon controlled. The membranes were then hastily opened and the child was extracted by a leg and handed to an assistant. It made no effort to breathe for at least seven or eight minutes although the heart was beating well. Finally it responded to stimulation and was soon all right. On examination of the cancerous growth from within the abdomen it was found to be too extensive to remove completely, and as the patient was very collapsed it was decided to proceed no further. The uterus was carefully sutured by 10 deep silk sutures and several superficial ones. No drain was passed through the cervix for fear of infecting the uterus from the malignant growth. The abdomen was closed without any drainage and the patient was put back to bed. She was profoundly collapsed and had to have several pints of normal saline solution per rectum as well as hypodermic injections of strychnine. She soon recovered, however, the abdominal wound healed by first intention, and she made a steady recovery and convalescence.

The child was nursed by a foster-mother for a week and was then fed in the ordinary way. The mother is gaining in weight, the hæmorrhage has ceased as well as the offensive discharge, but, of course, the malignant growth is still

present. She is, however, comfortable and free from pain, and the child is progressing favourably.

Remarks by Dr. RAW.—Cancer of the uterus is a terrible affliction at any time, but when complicated by pregnancy as far advanced as the seventh or eighth month it behoves the medical attendant to adopt some heroic line of treatment if he is to preserve the lives of both mother and child. It is a well-known fact in obstetric practice that cancer when once established in the cervix progresses at a much more rapid rate during pregnancy than when unimpregnated, and that the bleeding from the cancerous growth is profuse and continuous, especially during the later months of pregnancy; in fact, so excessive may it be as to endanger the life of the patient from progressive anæmia. To allow the pregnancy to go to full term would be to subject the mother to serious risk of her life either from severe hæmorrhage or rupture of the uterus, in addition to which the child would in all probability die either before or during the tedious labour. To attempt to deliver a living child through the cancerous mass either by turning or forceps would, I think, be futile, whilst even to perform embryotomy would set up increased hæmorrhage during the operation, which the obstetrician would have little chance of controlling. The medical attendant has to consider what is best for both mother and child, and there can be no doubt that Cæsarean section with, if possible, complete removal of the cancerous uterus is the correct and scientific treatment.

Sir James Simpson in referring to the operation of Cæsarean section said in 1871: "Accoucheurs sometimes—but fortunately very, very rarely—try to save the infant's life by having recourse to this operation [referring to Cæsarean section], an operation by which, however, the mother's life is almost inevitably sacrificed." What progress surgery has made during the 20 years since that opinion was written. A surgeon would now undertake the operation of Cæsarean section under proper conditions with a confidence that it would be successful, and there can be no doubt that very many lives, both maternal and infant, have been saved by this means. Of course, if the patient comes under our notice in the very early months of pregnancy the proper course to adopt would be to induce premature labour, but in this case the patient was first seen at the seventh month.

Dr. W. J. Sinclair states that "in advanced cases of cancer of the uterus when the disease is discovered at or about full term any treatment is unsatisfactory. Cæsarean section by any of the methods gave disappointing results. In eight cases quoted of ordinary Cæsarean section all the mothers died, whilst after Sänger's Cæsarean section of 13 women only three survived for a month or six weeks; most died directly after the operation." In the face of these terrible statistics it is satisfactory to note that this woman was saved as well as her child. It would have been an additional satisfaction to have removed the cancer, but this was impossible—in fact, any attempt to have done so would have been disastrous to the patient as the disease was too far advanced.

I have to express my great thanks to Dr. T. B. Grimsdale for his kind assistance and also to my colleagues for their great care in the treatment of the case.

LEEDS GENERAL INFIRMARY.

A CASE OF A PERITONEAL "BAND" INTERFERING WITH PERISTALSIS OF THE CÆCUM.

(Under the care of Mr. W. H. BROWN.)

IT is only of recent years that the importance of peritoneal adhesions has been appreciated. Many obscure and indefinite pains in the abdomen have been found to be due to peritoneal bands which have not caused any marked intestinal obstruction but have interfered with the peristaltic movements of some portion of the bowel. It is not improbable that many cases of intractable dyspepsia are due to similar adhesions of the stomach.

A man, aged 58 years, had been quite well up to last Christmas, but since that time he had been subject to a gradually increasing discomfort in the right iliac fossa. In the past six weeks a swelling had appeared at times, causing much pain when present. On admission he appeared to be fairly well. On palpating the right iliac region a swelling could be provoked, in size resembling a clenched fist; at first this was very hard, but it then slowly softened and disappeared. When the swelling was at its height the patient suffered great distress. It seemed likely that something, probably a band, was interfering with the movements of the cæcum. The abdomen was opened over the cæcum and a band was seen about half an inch wide and three inches in length, anchoring the bowel to the abdominal wall just above Poupart's ligament. This was ligatured and divided. The patient made an uneventful recovery.

Remarks by Mr. BROWN.—The case related is interesting from the fact that there had been no previous inflammatory attack to account for the presence of the condition found at the operation. Without any signs of actual obstruction the band caused symptoms which suggested a gradual obstruction being in course of formation. The effect of the existence of similar bands partially preventing normal peristalsis may account for the story one hears at times that patients feel something "give way inside them" after which their former "colic" pains disappear. The cæcum in the present instance behaved much in the way that a horse does when restrained too suddenly—i.e., rearing; the peristaltic wave being checked the contracting bowel rose up and became perceptible through the abdominal walls.

Medical Societies.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

Demonstration of Clinical Cases.—Fœtal Rickets.—The Treatment of Endocarditis.—Tuberculosis of the Choroid.—Syphilis transmitted to the Third Generation.—Meningitis treated by Drainage.—Pneumococcal Peritonitis.

THE provincial meeting of this society was held on June 29th at the Medical Institution, Liverpool, Mr. ROBERT JONES being in the chair.

Clinical cases were demonstrated by the CHAIRMAN, Dr. J. R. LOGAN, Mr. K. W. MONSARRAT, Dr. C. J. MACALISTER, Dr. LLOYD ROBERTS, Mr. W. THELWALL THOMAS, Dr. JAMES BARR, Dr. STOPFORD TAYLOR, Dr. NATHAN RAW, and Mr. G. P. NEWBOLT.

Dr. HENRY ASHBY (Manchester) related a case of so-called Fœtal Rickets. The mother was 46 years of age and the infant was her fourteenth child, born at term and well nourished. When seen at two weeks there were cranio-tabes, deformed chest walls, and five fractures, including both humeri, the left radius, the right ulna, and the left femur. Three weeks later the right femur fractured. The infant eventually made a complete recovery. Dr. Ashby doubted if such cases were examples of true rickets, but they rather resembled, he thought, the osteoporosis produced by feeding puppies on food deficient in salts of lime.

Dr. RICHARD CATON (Liverpool) read a paper on the Treatment of Endocarditis based upon about 500 cases of that disease occurring in acute rheumatism and chorea. He advocated (1) absolute rest in bed for several weeks; (2) the application of a series of small blisters in the region of the first four dorsal nerves in front, followed by poulticing; and (3) the internal administration of sodium iodide. To be of service this treatment must be commenced in the first fortnight or so.—Dr. WILLIAM CARTER bore testimony to the great utility of the method.—Dr. A. ERNEST SANSOM thought blisters a little less than worthless in endocarditis.—Dr. MACALISTER advocated blistering and rest both in endocarditis and in pericarditis. Instead of a blister an ointment of the red iodide of mercury (1 in 8) might be employed.—Dr. BARR spoke of the good effects obtained from blisters in the treatment of acute rheumatism.—Dr. H. R. HUTTON testified to the rapid disappearance of pericarditis under blistering.—Dr. CATON, in reply, said that in acute rheumatism he used the salicylates along with small blisters to the joints.

Dr. GEORGE CARPENTER and Mr. SYDNEY STEPHENSON communicated a paper upon Tuberculosis of the Choroid, which will be found at p. 134 of our present issue. The communication was illustrated by microscopical preparations and by numerous paintings of diseased eyes.—Dr. SANSOM and Dr. ASHBY discussed the paper.—Dr. WARRINGTON asked whether tubercles in the choroid were observed except in the last stage of illness.—Dr. CARPENTER, in reply, said that in the acute cases mentioned in the paper

tubercles were found in the choroid from one day to six weeks before death. Tubercle in the choroid did not necessarily warrant a grave prognosis, since some of the cases became obsolescent.

Dr. D. M. HUTTON (Southport) read a note on a case of Syphilis transmitted to the Third Generation. The grandfather produced a certificate before his marriage certifying that having had syphilis he was cured. The mother suffered from specific psoriasis. The child died from congenital syphilis at the age of five weeks.—Dr. ASHBY thought that the child might have succumbed, not to syphilis, but to a pseudo-syphilitic process of septic origin.—Dr. EDMUND CAUTLEY inquired whether there was any post-mortem evidence of syphilis in the infant.—Dr. GEORGE A. SUTHERLAND could not accept the psoriasis present in the mother as pathognomonic of syphilis.—Dr. HUTTON, in reply, said that the whole question resolved itself into one of possibilities and probabilities. Transmission in this case could not be demonstrated, but it was highly probable.

Mr. MONSARRAT (Liverpool) read a note on two cases of Meningitis treated Surgically by Drainage. The results were fairly satisfactory. The choice of a route for drainage was discussed.—Dr. CAUTLEY dwelt upon the initial difficulty of distinguishing between simple basic and tuberculous meningitis. In his own cases the result of surgical interference had been uniformly unfavourable.—Dr. LOGAN mentioned a case of chronic hydrocephalus where the lateral ventricle had been drained, but the child died some months later.—Mr. DAMER HARRISSON had passed chromicised gut into the lateral ventricles for the purpose of draining fluid into the base, but he was not inclined to proceed with the operation.—Mr. MONSARRAT, in reply, thought no operation satisfactory that did not combine ventricular drainage with drainage of the subarachnoid space.

Dr. JOHN H. BRYANT read notes of a case of Pneumococcal Peritonitis which he had observed in a girl, aged four and a half years. The abdomen was opened, general acute peritonitis was found, and pneumococci were demonstrated in the effusion. At the necropsy there was no pneumonia or pericarditis, but pleurisy and peritonitis were present. Dr. Bryant was inclined to think that so-called idiopathic peritonitis was of pneumococcal origin.—Dr. JAMES BARR discussed general infection with the pneumococcus as shown by pneumonia, pleurisy, peritonitis, and meningitis.

The following communications were taken as read :—

Mr. R. CLEMENT LUCAS: Removal of a Nail from the Second Portion of the Duodenum.

Dr. JOHN MCCAW (Belfast): Notes of a case of Infantile Scurvy.

Dr. MACALISTER (Liverpool): Observations on Cirrhosis of the Liver and Endocarditis in Children.

Dr. JAMES CARMICHAEL: Bimannal Examination in the Diagnosis of Abdominal Disease in Children.

Reviews and Notices of Books.

A Civilian War Hospital: being an Account of the Work of the Portland Hospital and of Experience of Wounds and Sickness in South Africa, 1900, with a Description of the Equipment, Cost, and Management of a Civilian Hospital in Time of War. By the Professional Staff—ANTHONY A. BOWLBY, C.M.G., F.R.C.S. Eng., Senior Surgeon; HOWARD H. TOOTH, C.M.G., M.D. Cantab., F.R.C.P. Lond.; CUTHBERT WALLACE, M.B., B.S. Lond., F.R.C.S. Eng.; JOHN E. CALVERLEY, M.B., B.S., M.R.C.S. Eng.; and Surgeon-Major KILKELLY, C.M.G., Grenadier Guards, Principal Medical Officer in Military Charge. With numerous Illustrations. London: John Murray. 1901. Pp. 343. Price 12*s.*

THE reader of this book will, we think, rise from its perusal with the feeling that it is what it pretends to be and that it fulfils the description given on its title-page. It is a record of the fitting out and organisation of a civilian war hospital and of the work that it did in the field. Apart altogether from the scientific value (which is considerable) of the contributions by the professional staff to the more strictly medical and surgical aspects of the war it is an instructive and useful book, for it contains much carefully considered and well-arranged information with regard to a number of practical points which is likely to prove serviceable in the organisation, fitting out, and equipment of civilian war hospitals on the occasion of future expeditions of a similar character. And we may here say, *en passant*, that future wars when conducted on anything like a large scale will inevitably, as we believe, give rise to increased calls upon the civil profession of this empire. However good and bountiful Government provisions for war may be they cannot be made and maintained upon such a scale and in such variety in point of *personnel* and *matériel* as to cope with all the requirements. The cost alone of a permanent establishment would be prohibitive and in any case the provision would inevitably have to be largely supplemented by voluntary and philanthropic aid. To this end, we may parenthetically remark, we have advocated that as far as the *personnel* is concerned, a list should be kept and maintained by the Government of the members of the junior medical and surgical staffs of the large civil hospitals of this country and its colonies to whom recourse could be had for professional aid in time of need. If we have not already reached, we are nevertheless approaching, the time when Nelson's famous signal will have to be, not what England, but what the British Empire, expects as the duty of its subjects. When this time comes and is realised books of this kind will be largely consulted.

But to turn now to our more immediate purpose—namely, the consideration of the volume itself—we may say that on referring to its pages in order to see the number of subjects and passages which we had marked for notice or reference it becomes at once apparent that in order to review the work as it deserves to be reviewed a far larger amount of space than we can give to it would be demanded and even then much would be left unsaid. We hope, therefore, that our readers will peruse it for themselves.

We are glad to notice that it is gracefully dedicated to Surgeon-General Wilson, K.C.M.G., the principal medical officer of the army in South Africa and to the officers of the Royal Army Medical Corps and the civilian surgeons of No. 3 General Hospital. This serves to indicate the professional harmony and good fellowship which existed between the civil and military medical elements. The "Portland" was the first of the civilian hospitals to be equipped and sent to South Africa and was probably also the first voluntary hospital attached to the British army at the front.

Surgeon-Major Kilkelly, Grenadier Guards, and principal medical officer of the hospital, deals with the *personnel*, equipment, and interior economy, and in the course of 17 pages—after briefly alluding to the transport difficulty in war and the necessity for bearing in mind in fitting out war hospitals that the lighter the hospital the quicker and the more completely will it reach its destination, and after adverting to the evacuation system and principle which is followed and the machinery employed—manages to embody a number of useful and practical points in the course of his observations.

Mr. Bowlby, the senior surgeon, follows with a brief description of the career and work of the hospital. Rondebosch, five miles from Cape Town, was the place fixed upon by the military authorities for it to commence its operations. This was a fortunate position in several respects, for it was in proximity to the three large base hospitals already established and in close companionship with No. 3 General Hospital at Rondebosch. Altogether the medical staff of the Portland Hospital had some 1000 beds available where they could see the sick and wounded, who had been sent down after the battles of Modder River and Magersfontein. They had thus an unrivalled opportunity of

acquiring a large experience of gunshot wounds, and subsequently, when the epidemic of enteric fever began to be serious in the camp at Modder River station, of that disease. Orders were afterwards received for the hospital to proceed to Bloemfontein which was reached on April 14th after having been preceded by an advanced party to choose a camping ground and to make the necessary preparations. The hospital took the whole of its possessions with it and it was well that it did so, for it was almost impossible to get anything sent up to Bloemfontein for weeks afterwards. During its stay at Rondebosch of just three months the hospital had had altogether 477 patients. Everything went uncommonly well with the medical service and its hospitals during the earlier and very trying stages and events of the war; but at Bloemfontein, as we all know, things were very different owing, as we have contended, to conditions and circumstances which were beyond the power of the medical service to have foreseen and prevented. The general health of our troops at Bloemfontein was, mainly from disease causes, very bad. Enteric fever, diarrhœa, dysentery, &c., were prevalent and, after the nature of such camp diseases, went on increasing at a rapid pace and in a more than geometrical ratio. Many of the camps had become contaminated and the health of the troops immediately improved when the general in command, at the instigation of the principal medical officer, changed the site of the camping ground. The very great importance of this as a sanitary measure is a matter on which we have fully commented in the various articles which have appeared in THE LANCET about this and other campaigns and it is one which is not sufficiently accentuated in our text-books. The invariable rule should be in the event of any outbreak of infectious disease in camp to change the site and, indeed, under ordinary conditions of campaigning to do this periodically as a measure of prophylactic hygiene. With the month of July came a remarkable change—empty beds and empty tents; the whole of the sickness and overcrowding had come and gone, we are told, in three short months and the work of the Portland Hospital in South Africa soon afterwards came to an end. During its stay from December to July this work is summarised as follows. The hospital admitted 1009 officers and men, and of these 37 died, 159 returned to duty, 303 were discharged to convalescent camps or hospitals, 98 went to England, and 412 were transferred to other hospitals at the base. It may be mentioned that of 303 surgical cases only three patients died.

Chapter III., embodying notes on the equipment and *personnel* of civilian war hospitals, gives some very useful and practical details. We are all in favour of simplicity and practicability of detail generally, and especially with regard to medical and surgical equipment and appliances—matters which have not, we are glad to say, been lost sight of in this book. We observe that it is considered absolutely necessary that all hospitals at the seat of war should have one Royal Army Medical Corps officer in charge. An account of the various marquees and tents used for hospital purposes is given, with a comparison of their respective merits and demerits one with another, together with a record of results, with which, speaking generally, we agree, as we do with the remarks on the unnecessary weight and size—width especially—of the regulation iron bedsteads in use at military hospitals, as well as with those on medical and surgical stores, antiseptic dressings, x-rays equipment, medical comforts, &c. We may interpolate a remark here that some carpenters and artificers would form a useful addition to the hospital staff (field and base), as was done in the Afghan campaign of 1878–79–80. This brings us to ambulance wagons. We quite concur in the assertion that a perfect ambulance wagon for field service has yet to be devised. That of the army regulation pattern is strong but it is too heavy and cumbersome, and, like so many things which are the outcome of committees, it is designed to provide for, and to accomplish, too many objects. Those of American pattern are light and fairly good. The Indian tonga is stated, as the result of experience, to have been the best conveyance for the wounded in South Africa. Those of our readers who have been in India and who have journeyed by tonga to the hills will realise that these vehicles are very good of their kind, but the range of their usefulness in warfare is, we imagine, nevertheless a limited one, and a really good ambulance wagon for the sole purpose of carrying the wounded has yet to be constructed. Wherever available, the easiest, safest, and best transport for wounded is by water in towed flat-bottomed barges and for land transport by Indian dhoolie-bearers. As to vehicular wheeled transport, we have not yet, as we have said, discovered a method suitable for general purposes.

We come next to the section devoted to a description of the medical work of the campaign by Dr. H. H. Tooth, assisted by Dr. J. E. G. Calverley, which strikes us as affording an able, clear, and eminently readable account of the subject. The most important place is naturally given to enteric fever, without which the medical casualties of the campaign would have been relatively insignificant. After all that has been written and said upon this subject it is refreshing to read the impressions derived from a carefully considered inquiry into the facts—these being stated in a scientific and judicial spirit. The subject has been already so fully dealt with in our pages that there is no need again to discuss it now. It must suffice to state generally that we concur in the causes assigned for, and the medical history given of, the origin, dissemination, and course of the epidemic. The views of the writers in these respects are very similar in effect to those which we have put forward. Touching the possible part played by flies we may notice an interesting point which might be made the subject of future investigation. Cultivations were made at the laboratory of St. Bartholomew's Hospital from the excreta of flies voided on temperature charts which had been kept in the enteric fever tents but with a negative result as far as the isolation of the bacillus was concerned. The failure to demonstrate the typhoid bacillus is not surprising considering that more than three months had elapsed and that the bacilli might have been destroyed in the alimentary canal of the insect. The organisms might, however, as suggested, be carried about on the legs and bodies of the insects. The recent investigations of Dr. Horton-Smith recorded in his Goulstonian Lectures, 1900, in regard to the fæces not being by any means the only channel by which the bacilli are removed from the body, and to the very important part played by the urine in this respect, are very pertinently referred to in connexion with the extreme difficulty (to say nothing of the influence of other conditions) of preventing the spread of infection under the conditions of war. That the bacilli may live and appear in the urine for a long time is undoubted. These investigations are very significant and serve to show, at any rate, how futile it is, as is too often done, to draw conclusions from imperfect data.

The prevalence of diarrhœa or looseness of the bowels is so common among troops otherwise strong and healthy on service in hot climates that it may almost be regarded as physiological, but it soon oversteps its limits, and its relations to enteric fever and dysentery must never be lost sight of. As regards the statistics relating to enteric fever we may congratulate the medical staff on the successful results—a percentage of deaths amounting to 12·5 only. The figures showing the results of inoculation, although favourable to the practice, are still too small for drawing any accurate conclusion. If we do not enter upon the clinical remarks and

description of cases of this and other fevers, dysentery, diarrhœa, and other diseases incidental to field service, it is not because we do not regard the writer's observations as valuable, for they distinctly are so, but because but little space remains to us for the consideration of the interesting and instructive section contributed by Mr. Bowlby and Mr. Wallace on the surgical work of the war.

In this section a succinct but sufficiently clear and detailed description is given of the weapons and projectiles used in modern warfare; the surgical aspects of modern rifle fire are considered, as are the results of the alteration from the old to the new rifle as affecting the surgical side of the question. The several points are separately taken up and discriminately weighed. When the small size of the Mauser bullet, its extreme range, and its comparative novelty in warfare are considered it is not surprising that some differences of opinion as to its effects should exist. Speaking generally there can be no doubt that both civilian and army surgeons were much impressed by the favourable course that the wounds, as a rule, ran; it was one of the most striking facts of the war. At one time it seems, say the writers, that almost any part of the body can be perforated with impunity, and the observer is inclined to agree with those who regard the Mauser as a humane bullet, while at another time and almost before that impression has passed away another case occurs which gives rise to the opposite opinion. Some striking instances are cited in illustration of this. The general trend of the authors' observations and experience is, on the whole, to modify the somewhat optimistic conclusions that have been expressed. One thing, however, appears clear—that to those who had the opportunity of comparing and contrasting the results of their experience in South Africa with those of previous wars the difference seemed marvellous, and a great change, amounting almost to a revolution, has taken place in the surgical treatment of gunshot wounds. With regard to wounds of the abdomen, while recognising that some wonderful recoveries occurred the writers evidently think that the gospel of the innocuous nature of bullet-wounds has gone too far. They have, in fact, been gradually driven to the conclusion that the great majority of men shot through the small intestine die, and think that the very generally expressed opinion that such wounds are comparatively seldom fatal is but little supported by fact. They are, very properly, emphatic on the fact that, although a bullet-wound is essentially a penetrating or perforating wound, it differs altogether from penetrating wounds inflicted by sharp-pointed instruments. There is always contusion beyond the area of the wound itself and the extent of this contusion varies with the velocity of the projectile and the nature of the injured tissue and, to some extent, with that of the projectile also.

After the discussion of such subjects as the typical wounds caused by normal small-bore bullets, entrance and exit wounds, different kinds of bullets, "explosive" wounds, and the clinical course, healing, and treatment of wounds, we come to excellent chapters on Bullet Wounds of Bones and Joints and their Treatment, Injuries of Blood-vessels of the Cranium and Spinal Column, and Thorax, with a special chapter on Wounds of the Abdomen and its Contents—all written with discriminating care and independent judgment and here and there interspersed with original views and practical suggestions. The clinical cases cited throughout the volume strike us as being very pertinent to the subjects in hand. We must not forget to add that the volume is well and copiously illustrated, well got up, and furnished with a good index. After what we have said it is, perhaps, needless to add that we have read the book with pleasure and profit and are glad to be able to express a high opinion of its merits.

Modern Cremation: its History and Practice to the Present Date. By Sir HENRY THOMPSON, Bart., F.R.C.S. Eng., President of the Cremation Society in England since its foundation in 1874. Fourth edition, revised and enlarged. London: Smith, Elder, and Co. 1901. Five plates and other illustrations. Pp. 204. 8vo. Price 2*s.*

THE statistics concerning the cremation of human bodies, cremation societies, and crematoria throughout the United Kingdom and every other European country (except France) and in America have been carefully collected by Sir Henry Thompson and are published in the interesting and scientific little work before us. This book appeared first in four parts more than 20 years ago, but in the third edition (1899) the subject-matter, enlarged and improved, was presented in six chapters and an appendix. This arrangement has been adhered to and 17 pages have been added in the present edition. The volume deals with the subject of cremation in a delightfully lucid and scientific way. An interesting sketch of the history of the English Cremation Society is first given. The society is now 27 years old and among the members of its council have been such men as Sir Arthur Arnold, Sir Charles Cameron, Bart., M.P., Dr. R. Farquharson, M.P., and the Rev. Charles Voysey. Those who approve of cremation will be pleased to observe that in spite of much adverse criticism and even temporary opposition from an unenlightened Home Office the society has flourished and that the number of cremations performed yearly steadily increases. Up to December, 1898, a total of 1283 dead bodies had been cremated at Woking. Up to December, 1900, 1824 bodies had been thus treated and rendered incapable of putrefaction and harmless to the living.

A full account of the deputation sent by the society to wait on Mr. Asquith, then Home Secretary (1893), will be found in the third chapter. A select committee in the lower House was duly appointed to inquire fully into "defects in the present system of death-certification" alleged by Sir Henry Thompson and his friends to exist. The report of this committee completely indorsed the statements brought forward by the society's deputation. A change of Ministry occurred soon after and the question relating to death-certification has been shelved ever since. "This flagrant blot"—to quote from the author's preface—"on the conduct of our social arrangements still exists." As might be expected from a knowledge of the thoroughness of Sir Henry Thompson's scientific researches and observations, the arguments for cremation from a public health standpoint are sound and catholic in view. He makes the surprising statement that upwards of 2000 acres in the metropolis have been used as burial grounds for our dead—acres which might have been sites of residences for our overgrown population or open spaces for the recreation of the masses. The book is not only a scientific exposition of the *pros* and *cons* of cremation, but contains also a detailed account of the crematorium, of the ceremony and process of cremation, and of the exhaustive investigation made in every case of death, lest cremation and burial should be premature, or the crime of secret poisoning should be concealed by the impossibility of a future exhumation.

LIBRARY TABLE.

Chemistry and Physics: a Manual for Students and Practitioners. By WALTON MARTIN, Ph.B., M.D., and WILLIAM H. ROCKWELL, Jun., M.D. London: Henry Kimpton. 1901. Pp. 374. Price 7*s.* 6*d.*—This work belongs to the series of modern text-books edited by Bern B. Gallaudet, M.D., demonstrator of anatomy and instructor in surgery at the College of Physicians and Surgeons, Columbia University, New York. The following is the first sentence in the preface of this book: "In the education of medical students a knowledge of chemistry and physics is

important, though from a practical point of view it need not be exhaustive." The book is not only not exhaustive, but it is most inadequate. This will be apparent when we mention that both inorganic chemistry and organic chemistry are dismissed in 182 pages. Theory is completely ignored, equations and formulæ are here and there wrong, whilst spelling is not entirely free from fault. We regard the section on physics in a more favourable light, but we know plenty of works which though they deal with the subject concisely and in a way adapted to the needs of the medical student, yet do so in a more masterly manner than is here displayed. The bulk of the illustrations are borrowed from the classic Deschanel. It is almost inconceivable that a work presumably devoted to physics for the special requirements of medical students should devote this much and no more to the "x" rays:—"'X' Rays.—This light from a Crooke's tube, termed radiant by him, has the property of passing through many substances formerly considered opaque while glass obstructs it. This light is popularly known as 'x' rays." This is all—not a word about Roentgen, the discoverer of the rays, and not a word about the use of the rays in medicine and surgery. The book is disappointing.

The Economic Disposal of Towns' Refuse. By W. FRANCIS GOODRICH, A.I. Mech. E. London: P. S. King and Son. 1901. Pp. 356. With 75 Illustrations. Price 10*s.* 6*d.*—It is a satisfactory sanitary sign of the times that the disposal of refuse has been brought to such a pitch as to merit discussion in a book of the exhaustive character of the one before us. It is not very long ago that the destructor was unknown, at least as a satisfactory means of disposing of refuse. The evolution of the refuse destructor dates back perhaps about 30 years when, as Mr. Goodrich points out, the destruction of towns' refuse by burning in a furnace was attempted in the north of England, but, as might have been expected, the first furnaces were of a very crude kind, baking rather than destroying the refuse or merely charring or sterilising it perhaps and driving off gases which were a source of offence. The first destructor erected in the vicinity of London, we learn from this book, was that constructed by Mr. Charles Jones, M.I.C.E., which was designed to destroy the gases produced in the destructor cells—that is to say, it consisted of two distinct parts: a furnace and a fume cremator. It is now found, of course, that a fume cremator is superfluous, and the modern refuse-disposing appliance is so satisfactory in its working and in regard to its results as to leave no excuse to our sanitary authorities for "tipping" refuse and leaving it to dispose of itself in offensive heaps as best it may. The construction of destructors has given rise to a new department of engineering and the peculiar problems presented have been overcome with characteristic success. We in this country may take to ourselves the credit of being the pioneers of this excellent movement. Mr. Goodrich has made his book more valuable than others that have hitherto been published on the subject because in its pages are described the various methods by which refuse is being dealt with all over the world, and thus the reader is brought into contact with the various difficulties of environment met with, chiefly climatic, in different countries. All the refuse destructors of the world are described, and perhaps connected with these the American practice is the most interesting to study. The work is of a highly instructive and practical character, giving the results of all the systems known where they have been in use or are in use in this country. We are glad to note a chapter on the Value of Towns' Refuse for Steam Raising, in which the author enters into the average composition of ashbin refuse, the heating power of ashpit refuse, the average evaporative power of towns' refuse obtained in practice, the analysis of well-known coals used for household purposes, the chemical composition of various coals, the relative efficiency of coals, and the composition of coal ash. The tables recording these results are clearly valuable as affording a guide to the fuel value of all sorts and conditions of garbage. The last chapter contains a few notes on Disposal of Street Refuse, Trade Refuse, and Market Offal. In regard to the disposal of the last-named offensive substances it is evident that in this respect the continental system is ahead of anything which we have adopted here. Speaking of snow the author says that it is scarcely necessary to say that neither in this country nor in America has it yet been found possible to burn snow in destructor cells, yet it is claimed, he says, for at least one American destructor that by its means water can be burned. Mr. Goodrich has spared no pains to collect a vast amount of material with regard to one of the most important branches of sanitary administration. His book may be safely described as a standard work and is of both educational and technical value.

A Syllabus of New Remedies and Therapeutic Measures. By J. W. WAINWRIGHT, M.D. Chicago: G. P. Englehard and Co. 1901. Pp. 230. Price $1.—The aim of this book is good, but unfortunately its usefulness must of necessity be short-lived. It contains a conspectus of the new and chiefly synthetic remedies now having a recognised place in medicine. We may mention as examples lycetol, citrophen, chloretone, nosophen, heroin, and eucaine. The author has done well in collecting clinical excerpts on the value of these new remedies. Practitioners are constantly wanting to know about new drugs of which they have never before heard or of which at least they have had no experience. Since it furnishes information of this kind this compilation of new remedies and therapeutic measures will be valuable, although, as we have said, new preparations are being added to the list of medicaments every day and it is impossible for a book to keep pace with them. Well-written chapters on Anæsthesia, Local and Regional, Animal Remedial Preparations, and Cold and Heat are added.

Scientific Papers and Letters. By A. H. SMEE, M.R.C.S. Eng., F.C.S. Carshalton: William Pile. 1901. Pp. 200.—Mr. Smee has at various times written upon a wide range of subjects and as is shown in the selection of papers before us he is the author of many original ideas. The papers have in part appeared in scientific journals and in part in private letters to scientific colleagues. We have been struck with the method which he describes (in the papers "On the Detection of Germs and Organic Matters in the Atmosphere and the Air we Breathe") for the collection of the moisture in the air, the deposited water to some extent precipitating also the impurities. For this purpose Mr. Smee employs an ordinary glass funnel drawn out to a point at the narrow end and sealed. The funnel is filled with ice, the effect of which is to cool the exterior wall of the funnel upon which the moisture in the air slowly condenses. As this moisture accumulates it trickles down to the point of the funnel and may be collected in any convenient vessel placed below to receive it. The deposited liquid when dried over sulphuric acid on a microscopic slide deposits, he writes, remarkable crystals. The delicate odour of flowers is quite apparent in the aqueous deposit. Mr. Smee considers that nitrogenised bodies are present in a crystalline deposit, and in the crystals obtained from fluids deposited in the wards of hospitals where zymotic diseases exist the curious property was noted that they deliquesce after formation and then recrystallise in other forms. This method, which the author calls "cold distillation," seems to us to be worthy of further study and application, as perhaps it may throw some light upon the nature of the organic impurities of the atmosphere. Other papers in this publication refer to Water-supply, the Chemistry of Albumin and Fibrin, Sounds and Fog, and House Cisterns. On this last subject the author gives a rough sketch of a form of cistern which would meet the requirements, he thinks, laid down by the inspectors of the Local Government Board in their report on the East London Water-supply during the drought. Mr. Smee's

cistern would not answer at all because in his sketch the service-pipe is placed at the top. In the event of the main supply being shut off, therefore, it would be impossible to draw off the water in the cistern except by means of the tap which he places below at the termination of a conical end, but then this would contain all the deposited impurities of the water.

The Acute Contagious Diseases of Childhood. By MARCUS P. HATFIELD, A.M., M.D., Professor Emeritus of Diseases of Children, North-Western University Medical School; Professor of Diseases of Children, Chicago Clinical School; Physician, Wesley Hospital. Chicago: G. P. Engelhard and Co. 1901. 8vo. Pp. 142. Price $1.—This little work is practically a *résumé* of the views of the later French and German pediatricians and the compiler has added thereto a few facts gleaned from his own experience. Eight diseases only are dealt with, and these include influenza. In treating the latter disease the author seems to think that every case should be regarded as probably primarily pulmonic in type, and that the medicines should be given with pulmonary complications in view. After attacks of scarlet fever sulphur disinfection is recommended, but we can hardly believe that the author intends to advise this method of disinfecting clothes and bedding or other articles the penetration of which by means of sulphurous acid is extremely difficult. The bacteriology of scarlet fever is somewhat fully dealt with and four rough diagrams are given. There are no other illustrations. In the treatment of variola salol is strongly recommended on the authority of Dr. Begg who, practising in China, has seen a great deal of the disease. He claims that in full doses frequently repeated salol hinders the full development of the pustules, tends to cause them to dry up at an early stage, and diminishes the itching and the need of scratching. A little more care might have been bestowed on the correction of the proof-sheets, for there are a good many mistakes, and two sentences on page 70 are hardly intelligible.

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PRIDEAUX'S PURE MILK CASEIN.

(PRIDEAUX'S PURE CASEIN AND LIFE FOOD COMPANY, LIMITED, MOTCOMBE, DORSET.)

THIS is an admirable product occurring in the form of a perfectly white, light, flaky powder soluble in water. It is separated from the milk by a special process which practically eliminates milk proteid in a pure and soluble state. Its solubility is a valuable feature of the preparation. It is practically tasteless and keeps indefinitely. Our analysis gave the following results which virtually confirm those already published: casein, 86·47 per cent.; lime salts (phosphates), 1·92 per cent.; soda salts, 1·01 per cent.; milk fat, 3·60 per cent.; and moisture, 7·00 per cent. If the moisture be entirely excluded this analysis shows no less than 93 per cent. of pure proteid. Careful testing for milk sugar was attended with negative results. We understand that the best quality of milk is used for the purpose and is obtained from English cows. We have not examined a preparation containing so high a proportion of proteid, and when this is coupled with the fact that this casein is soluble it is obvious that the preparation must possess extremely high food value. It readily peptonises and is therefore easily digestible. Soluble casein may have a very wide number of useful applications directed chiefly towards raising the flesh-forming value of a number of foods. Thus it could be added to bread, soups, beef-tea, tea, coffee, cocoa, and many other foods with undoubted dietetic gain. Moreover, it is free from milk sugar and hence could be used with decided advantage for the preparation of foods for diabetic patients. It contains a certain proportion of fat which, except by a series of laborious operations, and then only on the experimental scale, cannot be separated from the proteid. Soluble casein might be advantageously associated with beef preparations, especially those which are mere extracts. The solution of this casein presents the same characteristics as milk; it is slightly opalescent, but assumes exactly the opacity of milk when common salt or a little alcohol is added to it. Further, on boiling the solution and concentrating it a scum appears on the surface (albumin), just as when milk is concentrated by boiling. Dr. R. Hutchison has suggested [1] the preparation of a diabetic milk by separating from ordinary milk the casein, re-dissolving the proteid in weak alkali, and adding cream and a little saccharin to the product. Prideaux's soluble casein would appear to be excellently adapted for this purpose. Considering that it is the flesh-forming constituent of a natural food and that it is carefully prepared by a special method it must necessarily be a very powerful and concentrated form of nourishment.

TABLOID GALBANUM COMPOUND.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, LONDON, E.C.)

As is well known, galbanum is associated with assafœtida in the pilula assafœtidæ composita, assisting the stimulant, antispasmodic, expectorant, and laxative properties of the assafœtida. The tabloid galbanum compound contains four grains of the active official preparation.

CONCENTRATED CHICKEN SOUP.

(F. W. GODYE AND SONS, NELSON-STREET, BRISTOL.)

This soup is prepared in Ontario and is preserved in tins. We know for transport purposes that tins are most convenient, but we should regard it with satisfaction if this excellent soup could be preserved just as effectively in glass jars. However, a very careful examination of the liquor did not show the slightest sign of metallic contamination. The soup is of excellent flavour, possessing that glutinous property characteristic of freshly prepared chicken soup. The soup contains entire cooked portions of the chicken. It should make an excellent emergency ration and portable food, but, as we have hinted, there is a prejudice against tinned food which is not altogether without a reasonable basis and in the present instance the use of glass vessels would obviate this prejudice. In that case this soup would leave little to be desired.

UNSWEETENED CONDENSED SWISS MILK (EDELWEISS BRAND).

(THE SWISS MILK SOCIETY: LONDON AGENTS, H. GILBERTSON AND SONS, LIMITED, 11, ST. ANDREWS-STREET, HOLBORN-CIRCUS, LONDON, E.C.)

The feature of this excellent milk is, as analysis shows, that it is concentrated to approximately about one-third without the addition of sugar or of any preservative. The milk is quite sterile and keeps well even after the tin is opened. We could find no chemical preservative. The milk is of a creamy consistence and possesses a rich creamy flavour in which only the smallest suspicion of "scalding" taste can be traced. It is recommended on the label of the tin to mix one part of the concentrated milk with two or three parts of water. For the purpose of analysis we adopted the former proportion and the mixture so obtained gave the following results: total solids, 11·30 per cent.—consisting of milk fat, 3·17 per cent.; milk sugar, 4·00 per cent.; proteid, 3·51 per cent.; and mineral matter, 0·62 per cent. This shows that in accordance with the directions for use a milk of good quality is obtained. Especially is it important to add that all the cream is retained. We understand that the concentrated milk is prepared under bacteriological control and supervision, and, moreover, that the cows are fed for at least

[1] THE LANCET, June 22nd, 1901, p. 1753.

10 months of the year on pasture and not stall-fed, a statement which is quite consistent with the excellent character of the milk which we examined. The fact that this milk is free from added sugar is an undoubted advantage for many dietetic purposes.

COFFEE AND CHICORY ESSENCES.

(ALEXANDER ELDER AND SON, BEVERHALL-ROAD, EDINBURGH.)

Two coffee and chicory essences were sent to us for examination, the first being sweetened and made syrupy with sugar, and the second containing no added sugar, but a small amount of chemical preservative being added to both. We do not doubt the genuineness of these preparations since we were able to extract from them the aromatic oils of coffee as well as caffeine. The manufacturers have succeeded to a large extent in retaining the agreeable aromatic properties of the freshly roasted berry. Our analyses gave the following results. Sweetened: moisture, 30·37 per cent.; extractives and sugar, 69·63 per cent.; caffeine, 0·22 per cent.; and mineral matter, 1·32 per cent. Unsweetened: moisture, 69·89 per cent.; coffee extractives, 30·11 per cent.; caffeine, 0·48 per cent.; and mineral matter, 2·25 per cent. In our opinion the unsweetened is the better preparation of the two. The analysis of a great number of coffee extracts on the market were recorded in THE LANCET Special Analytical Sanitary Commission on the Composition and Value of Coffee Extracts in THE LANCET of July 4th, 1894, p. 43. It will be found that the preparations now under examination compare very favourably with the extracts then analysed and chiefly in regard to the proportion of the stimulating principle—caffeine.

New Inventions.

MEDICAL OZONISERS.

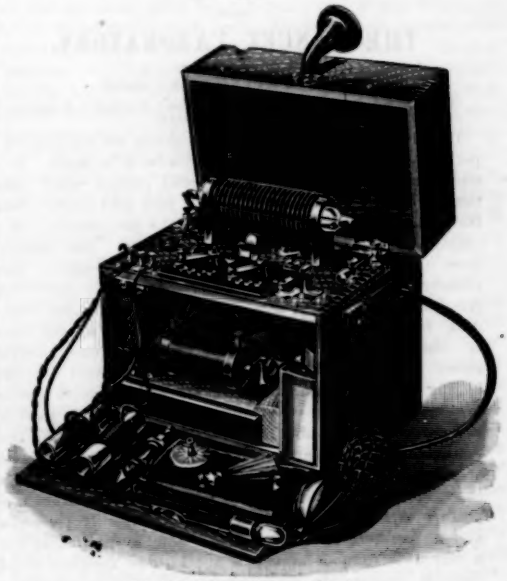
OZONE has had relatively but little application in therapeutics, chiefly, perhaps, on account of the difficulties associated with its production, but now that inexpensive and, moreover, portable apparatus for the production of ozone is obtainable there is no reason why ozone should not be tried more extensively in medical practice in a number of ways in which its well-known powerful oxidising property might be made use of. It is this property which renders ozone an unstable body and in the presence of moisture makes it fatal to germs, and so suggests its useful application in the treatment of wounds, for its cleansing and healing effects are due to this same instability—that is, the ease with which it gives up oxygen in a nascent and powerfully active state. The sterilising power of ozone is well shown when ozonised air is bubbled through water infected with the typhoid bacillus; its decolourising power is also easily shown by passing ozonised air through water of a brown or peaty colour, and it has been suggested that ozone might be used with advantage to bleach public water-supplies which show a yellowish brown tinge due to the presence of vegetable matter. Its destructive effect upon offensive matters, again, may be easily demonstrated by passing ozonised air through water foul with sulphuretted hydrogen. Its freshening effect upon the air of an apartment, a sick chamber, a hospital ward, or a crowded place is soon obvious where an ozone generator is at work. All these remarkable properties suggest how ozone might be used with distinct advantage in medicine and in surgery. It has been used in the form of ozonised air for the purpose of inhalation, exercising a disinfectant action along the respiratory tract and effecting a distinct increase in the number of red corpuscles and thus ministering to an anæmic condition. The simplest way, perhaps, of producing ozone is by means of the electric discharge, although there are other methods, which, however, are not suitable for medical purposes. Amongst the ozone generators which we have examined from time to time, none, perhaps, is so compact or so certain in action as the particular one known as the "Andreoli generator." It is very simple in construction, consisting of a partially-exhausted glass tube with an aluminium wire passing down the whole interior of the tube provided with a terminal for connecting with one of the wires from the induction coil. Outside the tube are a number of parallel coils of aluminium almost completely enveloping the vacuum tube. The pole of the vacuum tube is connected with one wire from the induction coil while the

FIG. 1.

The "Alpha" Medical Ozoniser and "Applicator."

aluminium coil is connected with the other wire. The discharge proceeds silently and a steady production of ozone ensues. The battery power need not be very great, indeed, the whole apparatus complete, including battery coil and generator, may be contained in a portable case. A portable ozoniser answering to this description is illustrated in the

FIG. 2.



The "Eta" Ozoniser and Inhaler.

accompanying figure (Fig. 1). It is known as the "Alpha medical ozoniser and 'applicator,'" and comprises a battery of

four so-called dry cells fitted with a regulating switch, an induction coil, an ozone tube, and an ozone "applicator." The illustration (Fig. 1) will explain the parts of the apparatus and its accessories. In the front of the case is seen the switch, and immediately behind it is the ozone generator. In the lid of the case is seen what is known as the "applicator," which is designed for the application of a stream of ozonised air to suppurating or gangrenous surfaces. On the right of this "applicator" is seen a glass tube which is used for the purpose of forcing ozonised air through water with a view to its purification and sterilisation. To the right of the illustration the "applicator" will be seen suspended on spiral wires provided with a counterpoise, so that the instrument may be suspended from any convenient point out of the way of the operator or patient. All the parts and accessories fit neatly in the case.

Another form of ozoniser is seen in Fig. 2. In this case provision is made for inhaling the ozone produced through a trumpet-like exit-tube fitted in the lid. For this purpose the lid is closed over the generator and air is gently aspirated over the coil from beneath. In this way ozonised air may be inhaled. This apparatus, however, is also an ingenious combination of other electrical applications. Thus, by means of the two switches shown in the illustration the current (primary) can be turned on for actuating a small electric lamp for the examination of the throat or nose or for administering a current (secondary) through the body by means of two terminal handles or by plate electrodes or by wire brush, all of which are shown in the illustration. This handy little apparatus is known as "the 'Beta' ozoniser and inhaler" and weighs only 11¼ pounds, while its dimensions are 10 inches by 6½ inches by 9½ inches. We have made a number of experiments with regard to the ozonising properties of this apparatus and with satisfactory results. The effect of ozone upon fœtid air is remarkable—it gives a sense of freshness which suggests its useful application in the sick room. Of course, the amount of ozone obtainable from the tube is proportional to the amount of electrical energy used. By means of a transformer for which special terminals on the ozoniser are provided ozone may be generated in powerful quantities by the alternating current from the main. These examples of ozonisers were submitted to us for inspection and trial by Messrs. Allen and Hanburys of 48, Wigmore-street, W.

A SIMPLE FORM OF PUMP FOR INFLATING THE ETHER-BAG INSTEAD OF BY BREATH INFLATION.

THERE are times during the administration of ether when the bag collapses and when it has to be inflated. Then, too, at the commencement of anæsthesia, soon after the face-

piece has been put over the patient's face, it is a great convenience to have a bag nearly full of air ready to affix to the ether apparatus. Hitherto the anæsthetist has often had to inflate the bag with his own breath—a practice by no means pleasant or advisable either for patient or medical man. With this form of pump the difficulty is easily overcome and already I have found it very useful in my practice. It was shown at the meeting of the Yorkshire Branch of the British Medical Association on March 27th, 1901. It was made for me by Messrs. Reynolds and Branson, Limited, Leeds.

HERBERT J. ROBSON, M.R.C.S. Eng., L.R.C.P. Edin.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on July 11th, Sir WILLIAM MAC CORMAC, Bart., K.C.B., K.C.V.O., the President, being in the chair.

The PRESIDENT reported the result of the election of three members of Council on July 4th, as already reported in THE LANCET of July 13th, p. 98. Mr. A. W. Mayo Robson, Mr. W. Watson Cheyne, and Mr. R. Clement Lucas were introduced, made declarations in the terms of the oath prescribed by the Charter of 1800, and took their seats as members of the Council.

A report from the Board of Examiners in Dental Surgery was read, approved, and adopted. The chief alterations made in the regulations for the Licence in Dental Surgery are as follows: additional courses in dental bacteriology and dental materia are required from students who enter at a recognised dental hospital and school on or after May 1st next; and the second professional examination is divided into two parts. This latter change is to come into force at once.

A report was received from the Committee of Management, and as arising out of this report the Council referred to the Committee of Management for consideration and report whether or not it is desirable that some alteration should be made in the regulations relating to the preliminary examinations in arts for candidates for the diplomas of the two Colleges.

At the last meeting of the Council a Member of the College was asked to explain his association with two pamphlets. The explanation required was considered by the Council and accepted, but the Council expressed to the Member the hope that he would no longer associate himself with these pamphlets.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at their late session. The thanks of the Council were given to Mr. Bryant for his services as the representative of the College.

The PRESIDENT reported that on July 4th, the day appointed for a meeting of Fellows, the required quorum of 30 was not obtained, 15 Fellows only, including five members of Council, having attended.

Mr. G. H. MAKINS applied for leave of absence from some of the meetings of the Board of Examiners on account of his presence being required at the meetings of the Government Committee on changes in the Royal Army Medical Corps.—Leave was granted.

The best thanks of the Council were given to Mr. Henry Morris for a donation of books; they included seven volumes of anatomical plates and the works of Albinus.

As already reported in THE LANCET, Mr. H. G. Howse was elected President and Mr. T. R. Jessop and Mr. F. Howard Marsh were elected Vice-Presidents. The following committees were appointed:—Museum Committee: Mr. Owen, Mr. Morris, and Mr. Cheyne. Library Committee: Mr. Pick, Mr. Page, and Mr. Godlee. Committee for General Purposes: Mr. Cooper, Mr. Gould, and Mr. Langton. Finance Committee: Mr. Butlin, Mr. Tweedy, and Mr. Willett. The following professors and lecturers were appointed:—Hunterian Professors: Mr. Charles Stewart, Mr. Frederick Gymer Parsons, and Mr. William McAdam Eccles. Arris and Gale Lecturer: Dr. Thomas Grigor Brodie. Erasmus Wilson Lecturer: Dr. Charles Powell White.

A unanimous vote of thanks was accorded to Sir William Mac Cormac for the manner in which he had for five years discharged the duties of President.

The next meeting of the Council will be held on August 1st.

THE LANCET.

LONDON: SATURDAY, JULY 20, 1901.

The London County Council and Penny Ices.

FOR many years we have pointed out the dangers attending the penny-ice trade. Accidents have occasionally occurred, and serious cases of illness, sometimes followed by death, have been recorded which were traced to the eating of penny or halfpenny ices purchased at the street-corners. The press at large have given publicity to these facts and at least some provincial towns have been moved to take action—notably, the corporations of Brighton and Liverpool. At last the London County Council has followed this good example. So far back as in our issue of August 24th, 1878, p. 264, we described in detail the penny-ice trade and then insisted that it would be comparatively easy to legislate on the subject. We explained that the penny-ice man differed in a remarkable manner from the generality of Englishmen of the same humble class. He was actuated by a much higher ambition and therefore would be more careful not to transgress the law. As a rule, these Italian itinerant street-vendors are very abstemious and thrifty people. They do not waste their money on drinking or other forms of extravagant merry-making. On the contrary, their one object is to save money so as to be able, after from 10 to 20 years' hard work, to return to their own country. They reckon in that time to be able to hoard up enough money to buy a small farm, probably in the Calabrian mountains, with the right of shooting over the neighbouring hills. Thus, the penny-ice man looks forward to ending his days as a landed proprietor and a sportsman. Persons actuated by such an ambition are generally orderly citizens and will not compromise so fair a future by getting in the bad books of the police.

Nevertheless, there is a serious difficulty in the way of enforcing the needed sanitary reform. The shooting licence and the farm can only be purchased if there is a very large profit on the penny ices. On the other hand, if the penny-ice man is compelled to live in a healthy tenement and to make his ices on premises where the surroundings are so well ordered that there shall be no risk of contamination, then it is to be feared that a large share of the profits will be eaten up in rent. So far as possible, therefore, these Italians cluster together, notably on Saffron-hill. They thus not only secure the companionship of fellow-countrymen, but they have close at hand all that they need for their trade. Ice in sufficient quantities and cheap is not to be obtained in all parts of London at four o'clock in the morning. It is at this early hour that the penny-ice man sallies forth with baskets and old bits of cloth or flannel to buy his store of ice. Then he must also find close at hand the milk, eggs, and colouring material that he needs and at once proceed to make his ices. It is only when this is done and the mixture can be left to freeze that he begins to think of breakfast and of dressing himself for his day's outing. Doubtless the fastidious would prefer that he should dress himself properly, and in any case that he should wash himself before making the ices, but this, we fear, is altogether too ideal a conception to be practical. It would necessitate his rising even earlier in the morning or starting later on his rounds—and many of these men go five or six miles, and sometimes even further, before they can reach a place that has not already been secured by some competitor.

The Public Health Committee of the London County Council recently brought up a report which was adopted by the Council and which recommended legislation forbidding the manufacture, sale, or storage of ices in any cellar or room in which there is an inlet or opening to a drain, or in any other place where there is any risk of contamination or infection. Failure to notify any case of infectious or contagious disease occurring among persons employed in this trade would lead to summary conviction and a penalty not exceeding 40*s*. Finally, every ice- "cream" vendor must exhibit on his barrow a notice giving the name and address of the person from whom the ices have been obtained. Many ices are made in small backyards of overcrowded tenement houses. In these yards there is generally one closet, or more than one, frequently in a very filthy condition, and there is a drain in the yard for the rain-water, which is often out of order or which has the trap broken. It is likewise very doubtful whether these yards are systematically swept and cleaned out. Should a law such as that which is now proposed be enforced, where are the ice-men to make their ices? It is not proposed to suppress the penny-ice trade altogether, nor is it desirable, we take it, to create a monopoly in favour of some large establishment that may offer the required sanitary guarantees. Yet somewhat similar monopolies exist with regard to a similar class of men—namely, the piano-organ grinders. These men cannot, as a rule, afford to buy a piano-organ, but must hire it from the middle-man. Cab-drivers also generally have to hire their cabs. From the public health point of view it would certainly be a great advantage if the ices were made in large and properly controlled establishments, a sort of wholesale penny-ice manufactory, where the itinerant penny-ice man could go for his daily supply. But it is to be feared that a great portion of the profit is due to the fact that the penny-ice men themselves manufacture the ices. If their profits had to be shared with a wholesale manufacturer they might have a much longer time to wait before they became landed proprietors in their own country. Yet there is so much economy to be realised in the subdivision of labour and in wholesale processes that something in this direction is perhaps possible. Like all economic revolutions it would, however, cause considerable disturbance and some distress. There are not only the penny-ice men to be considered, but the retail tradesmen who supply what they require, and here the question arises as to whether the ices are always made with suitable ingredients.

When we inquired into this matter we found that though cochineal was generally used to simulate raspberries or strawberries aniline-red crystals were also sometimes employed. With the latter 30 gallons of ice coulds be coloured for 1*d*., while it would cost 1*s*. 6*d*. to colour the same quantity with cochineal. Frozen water and sugar and colouring

matter which can be sold as raspberry ice cost about 1*d.* the pint. But the chief demand is for "cream" ices and these cost much more to produce. There must be a little milk thickened with arrowroot, and even though an egg or two may be occasionally employed too many are required to colour the ice economically, and therefore saffron or turmeric is added. But as saffron is about 20 times dearer than turmeric the latter is used when the customers are not over particular. Of course, a little cheap and rotting fruit will greatly "improve" the "delicacy," and some inexpensive gelatin of suspicious origin will give body and consistency to the mixture. Altogether there are various economical contrivances by which the value of the ices can be enhanced, though these are not free from danger to health. Therefore it would indeed be a great advantage if instead of being made in the secrecy of a backyard and in proximity to an overflowing dustbin these widely consumed "delicacies" were manufactured on large and well-managed premises, specially arranged for that purpose, where responsible persons would have a reputation to maintain which it would not pay to lose for the sake of effecting some petty economy. It does not suffice to enact laws condemning unwholesome processes and insanitary surroundings—some thought must be given to the creation of opportunities by which the penny-ice men will be able to observe the new regulations.

The Sanitary State of Hong-Kong.

WE hear from more than one source that the present sanitary state of Hong-Kong is most unsatisfactory, and there is much evidence to show that for many years past very little has been done in the way of improving the state of affairs. On the contrary, in some directions changes have taken place for the worse. It seems that as long ago as the year 1875 the late Dr. AYRES reported on the sanitary condition of the colony in a most unfavourable sense, but finding that no improvement resulted from his endeavours in that direction he was led to give up a hopeless struggle. A few years later, in 1882, Mr. OSBERT CHADWICK made another report, which was in due course printed and presented to both Houses of Parliament. Mr. CHADWICK recommended amongst other things that 600 cubic feet of air space per head should be provided in all rooms which were sub-divided into cubicles and that the ground surface of buildings should be covered with concrete. The latter recommendation was enforced after the plague epidemic of 1894, but the former recommendation has not even yet been adopted, and the amount of air-space insisted upon is at the present time only 400 cubic feet per individual. Many other alterations were advised by Mr. CHADWICK, but they have not been carried out. Some of the most important of the improvements which he recommended had reference to the dwellings of the poorer classes—that, for example, the houses should be provided with continuous back alleys, and that insanitary properties should be purchased and demolished. Mr. CHADWICK concluded his report with these words: "I trust that even should the suggestions be found undesirable or impracticable my report will show the necessity for strong and complete measures of sanitation, and I trust that they will be undertaken for the immediate benefit of the public health without waiting for the necessity to be demonstrated by the irresistible logic of a severe epidemic." Twelve years later, on the outbreak of an epidemic of plague, the necessity which existed for the reforms was abundantly proved.

The attention of the inhabitants of Hong-Kong has lately been strongly directed to a consideration of the conditions under which they have long been and still are living. The presence of bubonic plague has impressed them, and a series of trenchant articles written by Mr. ALFRED CUNNINGHAM has apparently for the moment caused their chronic apathy to be replaced by a feeling of excitement approaching panic. The articles have been republished in the form of a pamphlet[1] which contains, also, a reprint of leading articles bearing upon the subject which have appeared in the *Hong-Kong Daily Press* and the *China Mail*, and some letters which have appeared in the former paper. There appears to be no shadow of a doubt that the drainage of Hong-Kong is inadequate, that there is not enough water to flush the sewers, and that the soil is saturated with decomposing fæcal matter. A Sanitary Board exists, but this Board has no administrative functions, and the recommendations of the Board are sometimes wholly ignored. The responsibility for the present state of things therefore rests with the Executive Government—that is to say, with the Colonial Office. Dr. F. W. CLARK, the medical officer of health of Hong-Kong, has lately (May 30th, 1901) succeeded in getting the Sanitary Board to pass two resolutions recommending the Government to make arrangements for flushing the sewers. The first resolution was as follows:—

"That the board recommend the Government to utilise all the fresh water which now runs to waste in the trained and untrained nullahs of the city by building dams and forming tanks for the automatic flushing of the sewers and storm-water drains."

The resolution is so obviously sensible that it seems at first sight curious that Dr. CLARK should have had any misgiving as to the effect of such a recommendation passed by the Sanitary Board. It is in this connexion that we go into detail in regard to the matter. Dr. CLARK in the course of his speech said that the position of the Board recalled the parable of the importunate widow, and the resolution was strongly criticised by the president of the Board, the Hon. W. CHATHAM, who presumably represented the Government as an official member. The ground of opposition of the official nominee was that the nullahs were sometimes dry and that water was therefore not always available, and that it was especially liable to be deficient in quantity when it was most required—that is to say, during the hot season. But it must be said that Dr. CLARK did not propose to rely solely on this source and his next resolution (as he pointed out, the necessary corollary of the first) was that a supplementary supply of sea-water should be pumped to make good the deficiency. The resolution was as follows:—

"That the Government be requested to again consider the question of the flushing of the sewers and storm-water drains

[1] The Need of Municipal Freedom in Hong-Kong, by "Scrutator," with articles and correspondence thereon, reprinted from the *Hong-Kong Daily Press* and *China Mail*. Hong-Kong: The *Daily Press* Office, 14, Des Vœux-road. 1901.

of the city with sea-water pumped from the harbour to suitable storage tanks."

Both these recommendations were passed and the Board then discussed a third motion, having regard to storm-water drains. Dr. CLARK moved :—

"That the Government be requested to consider the advisability of trapping all inlets to the storm-water drains, in view of the fact that the 'report on the latrine and urinal accommodation of the city and its connexion with the fouling of the storm-water drains,' forwarded to the Government in 1899, showed that the contents of the storm-water drains are as foul and in some cases even fouler than the contents of the sewers."

The fact that such advice on the elements of sanitation has to be forced on the attention of the Government of Hong-Kong year after year clearly shows the existence of a state of things which is discreditable to the authority responsible and dangerous to the community.

Mr. CUNNINGHAM'S articles, to which a brief allusion has already been made, are vigorously written. They display in some places a warmth of feeling which it is not necessary or desirable that we should imitate, but which is doubtless quite excusable in one compelled to live under such uncomfortable conditions and suffering daily and hourly from the neglect of the governing authorities to carry out their obvious duties. It cannot be pleaded that the colony is too poor to be able to afford to pay the expense necessary to ensure efficient sanitation. Sir HENRY BLAKE, in his report on the financial condition of Hong-Kong, lately pointed out that the condition of the colony was "most flourishing—that its future promised to be bright and that there was a large excess of revenue over expenditure." But in almost every respect the general management of the colony appears to be open to improvement. The deficiency of the water-supply has been mentioned, but in addition to this the inhabitants have other causes of complaint. The roads are bad, the town is overcrowded, and the sanitary staff is undermanned. "The sanitary staff," says Mr. CUNNINGHAM, "consists of a doctor and about 20 inspectors who are not paid sufficiently well to induce a man with sanitary training and experience to accept such a post." A single sanitary officer is certainly not enough ; it is necessary that he shall occasionally be away on leave, and it is stated that it happened that he was away lately on the outbreak of an epidemic of plague. The condition of the dwellings of the poor in Hong-Kong forms a constant source of danger to the whole town. The houses are greatly overcrowded ; they are ill-lighted and insufficiently ventilated. Vested interests are treated tenderly in Hong-Kong, and Mr. CUNNINGHAM does not darkly hint—he plainly says : "The unofficial representatives in the Legislative Council are concerned in these vested interests." Such an accusation cannot be allowed to pass without inquiry. The health of the people of Hong-Kong depends to a large extent on the sanitation of the place. Cases of plague must in the ordinary course be occasionally imported. The spread of the disease in the town will depend largely on its hygienic conditions. Overcrowding and insanitary dwellings will have their effect in increasing the number of cases and the mortality. It is said that the overcrowding is actually encouraged by the action of the "unofficial representatives of the executive council." Such a statement, publicly made, widely spread and uncontradicted, certainly deserves the attention of the Colonial Secretary.

This alleged scandal forms but one part of the subject. Whatever the truth may be about this particular accusation we are more concerned to show that there is no doubt that the whole question of the sanitation of Hong-Kong requires a thorough and impartial investigation and prompt action that the place may be put into a sanitary and a civilised state with the least possible loss of time. Dr. CLARK, the medical officer of health, has apparently done and is doing the best he can under the most trying conditions. He requires support and help. Nothing is more discouraging to a man whose heart is in his work than a knowledge that he has not the power to ensure that what ought to be done shall be done, and done quickly. The persistency of the importunate widow was not an unfeminine characteristic, but a Sanitary Board should be invested with some power more immediately effective than importunity.

The Public Hospital and the Private Individual.

THE voluntary support of charitable institutions has always appealed strongly to the generosity of Englishmen. It is well in accord with the national character that men who have inherited a great name and great wealth, or who have amassed large fortunes through commercial enterprise, or, which is rarer, who have met with exceptional professional success, should spare a portion of their wealth to some benevolent institution in which they are interested and of the excellence of which they are convinced. With different peoples the expression of philanthropy, as of other qualities, takes different forms. In Great Britain it is natural and congruous for such expression to take the form of unostentatious substantial benefit conferred upon less fortunate or suffering fellow-citizens. In ancient Rome the victorious and enriched conqueror thought that he could in no way better benefit his fellow-men than by providing some gigantic spectacle. A day's amusement seemed the appropriate offering due from his aggrandisement to his humbler fellows, and the plaudits of a multitude gratified his ears when at his personal expense some score of gladiators were butchered to make a Roman holiday.

Even in later days than those of classic Rome the love of ostentation that is deep-rooted in the nature of many peoples has led successful men to demonstrate their public benevolence by providing some exceptional opportunity for general festivity and enjoyment. But the sober and solid Anglo-Saxon character prefers more lasting benefits—to endow a hospital, to provide a free library, or in some way or other to advance the public good on a large scale appeals to us as a finer and more satisfactory expression of practical goodwill towards our fellow-creatures. In this way many a person, whose name is perhaps unknown except in the small limits of his native place, has conferred the truest benefits on successive generations of fellow-townsmen. And of men who have on a huge scale advanced the public welfare by tremendous efforts of philanthropy and self-sacrifice Great Britain has provided probably more than any other one country as yet, though undoubtedly the United States of America run us close. In every class, in every sect, in every social arrangement there will be found among us some name piously remembered for great philanthropic exertions. The political and religious freedom of

the country, indeed, has fostered a noble competition of unselfishness and stimulated efforts that are apt to languish where State provision is too predominant. It cannot for a moment be maintained, then, that there is a lack of charitable feeling in Great Britain, or that men of wealth are chary with money when public benevolence is needed, and yet a review of the financial position of some of the great London hospitals might well suggest the opposite conclusion. To be in debt is almost the usual condition of a large general hospital. Its name may be a byword for skill and kindness, and thousands of poor folk yearly reap benefits within its walls. Great physicians and surgeons may have been fostered in its wards, and the richest and the noblest may have had reason to bless the institution where such abilities have been developed. Is it not a paradox that institutions such as these should have constantly to beg for money to continue their very existence and to seek alms that they may be able to confer their blessings on the sufferers of the city? If any gifts deserve SHAKESPEARE'S beautiful epithet "twice blessed" most assuredly they are those that help the needs of a great hospital. Here it is a double work that is constantly going forward. It is not only that the sick poor are being ministered to, but day by day the teachings of experience are being given to students in whose hands mainly lies the future physical welfare of the nation.

The individual rarely realises how much he may owe to the opportunities for training that can only be provided by great hospitals. Such reflections as we have expressed must have assuredly been in the mind of Lord PORTMAN when he gave his generous thank-offering of £1000 and a yearly subscription of 10 guineas to Guy's Hospital. Lord PORTMAN had been ill, and with his contribution to the funds of Guy's Hospital he wrote a letter stating that he owed his recovery under Providence to the medical men and nurses all of whom had been trained at that institution. Here is such a proof of gratitude and generosity as cannot be too widely known or too warmly praised. We should have no need to wonder whether we can provide on this side of the water a philanthropist of the vast power and the patriotic spirit of certain Americans if Lord PORTMAN'S example were but to be generally followed by the many men of wealth and position who can well afford to walk in his steps. Let those who have the wealth and the opportunity realise that their duty is not really finished when they have paid their medical man's account, but that something is, indeed, due from them to the hospital which sent him to their aid properly equipped for the service which they need. Such thank-offerings as this of Lord PORTMAN resemble, but are more than, the votive offerings hung upon the walls of the temple by mariners saved from shipwreck. They are prompted, no doubt, partly by feelings akin to that reverent gratitude of old, but with the enlightenment of a later age they not only ease the conscience of the donor but they also go far towards securing an equally happy relief from suffering for others who may be stricken. Very many rich men and women fall sick, recover, and are grateful to the medical men under whose care their illness has had a happy termination. What proportion, we wonder, ever found in their recovery a reason for subscribing in some way to a hospital? Yet it needs but little reflection for them to see that such a call upon their charity is really made with all justice. We do not disregard the large number of charitable gifts that are actually made. We hold that this country can point to no worthier national emblems than to the many great hospitals which bear the proud legend, "Entirely supported by voluntary contributions." What we do insist on, though, is the fine particular opportunity for charity towards hospitals—an opportunity frequently arising and too seldom employed—that Lord PORTMAN has demonstrated to all who may be similarly placed by his contribution to the funds of Guy's Hospital.

Annotations.

"Ne quid nimis."

PORTABLE ISOLATION AND EMERGENCY HOSPITALS.

A BILL has been adopted by both Houses of Parliament which gives local authorities the power to transfer to the county councils any isolation hospital which they may have built. The object of the Bill is evidently to encourage the construction of such hospitals by extending the area on which the rates to meet the cost may be levied. So far so good; but this does not cover all the necessities of the case. There are two requirements to be considered. First, there are the ordinary cases of infectious disease which need isolation and which occur under what may be termed non-epidemic conditions. It is a comparatively easy matter to make the necessary provision for these. Secondly, there is the possibility of an exceptional, virulent, and widespread epidemic. It is quite certain that the great majority of sanitary authorities are not prepared for such a contingency. There may be one or more isolation hospitals, but they would be insufficient for a really widespread epidemic. As an example of our meaning we may take the epidemic of typhoid fever at Maidstone. During the last two weeks of September, 1897, 509 cases of typhoid fever were notified and it is unreasonable to suppose that a small town of only 32,000 inhabitants, which in no wise anticipated such a severe and sudden epidemic, should have been provided beforehand with isolation hospitals large enough to hold so considerable a proportion of the population. The result was that the Salvation Army barracks, several schools, and other buildings had to be converted into emergency hospitals. This, of course, necessitated some delay, which was mischievous, and the buildings, when secured, had to be fitted up, which meant further delay. Finally, as these buildings were not erected for hospitals they were naturally not suited for the purpose. Still, this was the best that could be done under the circumstances. But cannot something better now be organised in view of future emergencies of this description? Possibly some central authority or authorities—such as the county councils—might lay up a store of portable field hospitals. These hospitals might be built of varying sizes, holding from some 12 to 50 beds each, and any number of them might be set up in rapid succession one by the side of the other. Sanitary authorities would then only have to construct permanent isolation hospitals for what might be regarded by the Local Government Board as the reasonable needs of the district. But any such temporary provision as is here in question should not be allowed to prevent—as conceivably it might—the provision of suitable permanent structures and the acquirement of the necessary site or sites upon which the temporary structures could be erected. Assuming, however, the suggestion to be carried out a telegram to the

central authorities could be sent and the hospital, with all the accessories, could be on the spot within 24 hours and could be erected and ready to receive patients in the space of another 24 hours. As the epidemic spread so would more hospitals be sent for. When the epidemic was over the hospitals could be pulled down, disinfected, and sent back with equal promptitude, although we have grave doubts whether, in the case of certain diseases, disinfection could be properly carried out, and such hospitals with the wear and tear to which they would be subject would soon cease to be thoroughly satisfactory. Moreover, in the winter months difficulty might be experienced as regards heating. In summer some such provision as is suggested is already held in readiness in the shape of tents by certain authorities. The local authorities would pay a rent for the use of these hospitals which, in the course of time, might repay the capital expended in their purchase. Assuming the practicability of this scheme efficient and sufficient accommodation might be provided with great promptitude to the poorest local authorities. Under such circumstances there would be no excuse for delay and inefficiency in isolating the victims of an unexpected and far-reaching epidemic.

MYASTHENIA GRAVIS WITH LESIONS FOUND IN THE THYMUS GLAND AND MUSCLES.

CONSIDERABLE attention has been lately paid to the condition known as myasthenia gravis, but up to the present time no pathological change has been demonstrated either in the nervous system or muscles to account for the condition. In the *Neurologisches Centralblatt* for this month, however, there is published by Laquer and Weigert a case in which definite changes were found in the muscles. The case is that of a man, aged 30 years, who in 1896 suffered from giddiness, palpitation, and feeling of weakness after exertion. In 1900 he experienced difficulty in raising the arms and at the same time had drooping of the right upper eyelid; a few months later there was marked weakness in chewing and also in the muscles of the larynx, and after prolonged reading aloud the patient became hoarse. The muscular weakness was well shown in the deltoid muscle. After examination of the patient a severe attack of cardiac failure occurred from which he was with difficulty revived. After four months' improvement took place and he returned to work, but in four weeks he again became weak, with difficulty in swallowing, nasal speech, and weakness of the neck and lumbar muscles, so that he could no longer raise himself. The muscles gave the myasthenic reaction. The difficulty in respiration became distressing owing to the paresis of the diaphragm and intercostals, but the patient remained fully conscious till the time of death. At the necropsy there was found in the situation of the thymus gland a tumour about five centimetres in length and breadth and about three centimetres in thickness. It lay in close connexion with the pericardium but did not involve the great veins. From the lungs a tag had become firmly adherent to the tumour. The nervous system and the muscles appeared to the naked-eye to be normal. On microscopical examination the tumour was found to consist of small cells, lymphoid cells which form the chief part of the normal thymus, larger epithelioid cells also normally present in the thymus, and Hassall's bodies. In many of the veins within the tumour the walls were destroyed and the tumour cells had grown into the lumen and the same appearance was also present in the arteries. But of most exceptional interest was the condition found in the muscles. In the deltoid and diaphragm it was found that at many points both in the sheath of the muscles and between the muscle fibres there was a great invasion of small lymphoid cells which closely resembled those found in the thymus tumour and to a lesser extent the larger epithelioid cells were also present. The muscle fibres themselves, however, appeared to be normal. In the heart muscle similar foci of cells were found, but much less than in the skeletal muscles. Nothing abnormal was found in the nerves, spinal cord, or brain. The combination of myasthenia gravis with disease of the thymus is noteworthy, and though the same condition may have been present in some cases it is hardly likely that such marked changes in the muscles should have escaped the observation of those who have carefully examined these cases microscopically.

DEATHS FROM LIGHTNING.

Two deaths are reported from Sussex during the thunderstorm on July 6th. Both victims were agricultural labourers and were at work in the fields at the time the storm burst over the district. When the rain came on one sought shelter in a shed situated under some trees, the building having a corrugated iron roof. The lightning struck the building. The labourer was also struck and according to the evidence of the medical witness it was his opinion that the lightning left the deceased by a chain which hung out of his pocket and to which two knives were attached. Rigor mortis set in quickly. In the other case the victim was seeking shelter when he was struck down. He was found in a field drain. His clothes were smouldering. The skin on the right side of the face resembled the condition found in the second stage of burning. The body was scorched in places. Both deaths occurred within a few miles of each other in the Ashdown Forest district.

INCREASING STERILITY OF AMERICAN WOMEN.

DR. GEORGE ENGELMAN of Boston read a paper on the subject of the increasing sterility of American women at the annual meeting of the American Medical Association held in June, basing his conclusions upon numerous cases carefully investigated by himself, the conclusions being confirmed by independent investigators such as Dr. Wilbur of Michigan, Dr. Abbott and Dr. Kuszynsky of Massachusetts, and by the studies made by Dr. Chadwick of Boston of the records for that city of the eighteenth century. The various results closely conformed to one another and substantiated the accuracy of the whole. The main facts and conclusions were as follows. 1. The sterility of women has increased, and their fecundity has diminished, in the United States to an excessive degree of late years. Thus, in the eighteenth century 2 per cent. of American women are recorded as sterile, while the average fecundity was five children per married woman. "At the present day the sterility of the American woman is greater, and her fecundity less, than that of the women of any other nation except France." Thus, in St. Louis, 21 per cent. of women of the labouring classes are sterile, the proportion rising to 24 per cent. among women of the higher classes. In Massachusetts the ratio is 20·2 per cent. generally for women, and in the city of Boston it is 23·7 per cent. in the labouring classes. 2. The fecundity of American women was five children per family in the eighteenth century, 4·5 in the beginning of the nineteenth century, "and now at the end of that century it is between 1·8 and 2·1 per family." The exact figures are 2·1 in Missouri, 1·8 in Michigan, and 1·8 in Boston for native-American women. With regard to occupations and professions, the interesting fact is recorded that fecundity is lowest amongst women graduates of colleges, the proportion being 1·3 per woman. 3. Comparing these figures with those obtained from the immigrant Irish population, it is found that a high ratio of fecundity prevailed among Irishwomen, the figures being 4·2 for St. Louis, 3·5 for Boston, and five for Michigan. For German women the figures were also high—viz., 3·4 for St. Louis and six for Michigan. The fecundity for all female foreigners in Massachusetts was 4·9. 4. Dr. Engelman

records his conviction that an increase of secondary or artificially induced sterility (prevention of conception by chemical and physical measures) is largely responsible for the results amongst American women. Miscarriages, too, are correspondingly frequent—viz., 10 miscarriages on an average in 27 labours among native-born American women, the proportion being the same among negro women. There is not, observes Dr. Engelman, an increase of primary sterility from gonorrhœa, utero-ovarian disease, and the like among American women, thus confirming the previous conclusion that the increase of sterility was due to artificial measures and not to primary disease. 5. The ratio of primary sterility in American women during the eighteenth century was 2 per cent., that of Russia is at present 2·8 per cent., and of Norway 2·5 per cent., these figures giving the average proportion in peoples of good moral and physical health. Dr. Engelman concludes that wilful and self-inflicted sterility is the cause of the relatively low fertility of women in America and other countries, and affirms his conviction that the ultimate results are an increase of suffering in women who give themselves up to it, apart from the national evils which may follow in the train of depopulation should the practice become more numerically prevalent and compensating causes be removed.

YERBA MATÉ AND AFTERNOON TEA.

A CHERISHED British institution is, it seems, in danger, if not of abolition at all events of considerable, and possibly of fundamental, modification. "At the 'five-o'clock,'" says Dr. Dedet in the *Archives de Médecine Navale* for June, "the American herb *maté* is about to become the substitute of tea, or of all other refreshing beverages." How and when the popular refection known as "five o'clock tea" first came into vogue is not so clear as might, perhaps, be expected. As in some other institutions of lesser, and of greater, importance the origin of the agreeable function is more or less wrapped in obscurity. According to some authorities lawn tennis and the practice of indulging in the cheering cup of an afternoon stand to each other in the relation of cause and effect, whereas in the opinion of other equally positive observers the custom of post-meridian tea-drinking is referable to the more remote period when the lately resuscitated game of croquet began to invade our grass-plots. However this may be, Dr. Dedet desires to sound a note of warning before the substitution which he announces shall have become an irrevocable fact. It was in 1874, while serving in the French navy, that he made the acquaintance of maté for the first time. His ship was stationed at Montevideo and in the *salons* of that lively South American city it was then usual to inhale the vapour of a simmering (*mijotant*) infusion of the leaves from a *bombilla* or narrow-mouthed vessel through a tube ending in a globular mouthpiece. The apparatus apparently circulated amidst the company from mouth to mouth, just as the pipe of peace used to circulate when Red Indian braves were assembled in conclave. At that time maté was unknown in Europe, even as a medicament, but since then, according to Dr. Dedet, it has become known as a first-class *agent d'épargne* and cardiac tonic, with possibly febrifuge qualities as well. An analysis made by M. D. Parodi shows that in 1000 parts of yerba maté (ilex paraguayensis) there are 40 of caffetannic acid, seven of caffeine, with smaller quantities of resin, fat, and essential oil. In people who suffer from diseased kidneys the employment of maté is likely to give rise to hæmaturia. Dr. Dedet had recently a patient at Martigny-les-Bains, an ambassadorial attaché, aged about 40 years, who was accustomed to drink an infusion of 30 grammes of maté in 1000 of water "to enable him to work at night." The diplomatist was a martyr to oxaluria, and by a process of exclusion his disability was unmistakeably brought home to the infusion. At once he abandoned the habit, whereupon his symptoms improved, and at the end of 12 months he was able to report himself completely free from all nephritic trouble. "I think," says Dr. Dedet in conclusion, "that like coffee, tea, &c., yerba maté should be interdicted in persons whose kidneys are defective. If this plant should enter further into European alimentation cases in support of mine will no doubt be recorded. I publish mine to open the road."

PUPILLARY DISTURBANCES IN MENTAL DISORDERS.

AN interesting contribution to this subject has been published in a recent *Thèse de Paris* by Dr. Roger Mignot. Apart from the attention devoted to the clinical study of the pupillary symptoms in general paralysis, but little has been done hitherto in this direction as regards other mental disorders. After a lengthy physiological description of the nervous mechanism which subserves pupillary reflexes Dr. Mignot points out that even as regards general paralysis different authors have arrived at varying conclusions. Thus, to speak only of the pupillary reflex to light, Thomsen and Mendel found alteration of this in 47 per cent., whereas Francotte found it in 88 per cent. of cases of general paralysis. To prevent difficulties in collating results it was necessary that the same technique should be adopted under conditions as nearly similar as possible. Thus Dr. Mignot found that among 22 cases of advanced general paralysis inequality of the pupils was met with in 63 per cent., abolition of the light reflex in 77 per cent. and diminution in 22 per cent., and alteration of the accommodation reflex in 50 per cent. As regard non-paralytics, the statistics of authors differed. Oeboker found inequality of the pupils in 2 per cent. and Thomsen found immobility of the pupils in 2·1 per cent. Verga and Castiglioni regarded pupillary disturbances as not special to any form of mental alienation and found them in 74 per cent. of cases of insanity generally. Dr. Mignot from careful and repeated observations concludes that pupillary disturbances are not infrequently met with in organic dementia, senile dementia, paranoia, degenerative insanity, intermittent insanity, and the alcoholic insanities. He confirms the observation of Kraepelin that in dementia præcox mydriasis is frequent (30 per cent. of cases). He moreover shows that pupillary inequality may be met with in 32 per cent., disorder of the light reflex in 62 per cent., and of the accommodation reflex in 12 per cent. of cases of dementia præcox. Characteristics of the latter disorder are the variability and alternation of such pupillary changes which may be present in one form now and be altered to-morrow. Among 12 sufferers from senile melancholia alterations of the light reflex were found in 11 cases, this reflex being found to be absent on occasions in two cases. He concludes that while alterations of the pupillary reflexes are frequent and progressive in general paralysis, organic dementia, and senile dementia they are of a changeable and variable character in the other psychoses above mentioned, especially dementia præcox and senile melancholia.

THE ANNUAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE sixtieth annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held in the Medical School of the Queen's College, Cork, on Thursday and Friday, July 25th and 26th, under the presidency of Dr. Oscar T. Woods, who will deliver an address and distribute medals and prizes on the opening day at 2 P.M. After the President's address the following papers will be read. Mr. John Carswell, Convener of Committee on Inebriates of the Corporation of Glasgow, on the Working of the Inebriates Act; Dr. Thomas Drapes, medical

superintendent, District Asylum, Enniscorthy, Ireland, on Insanity and Phthisis; Mr. Michael J. Nolan, medical superintendent, District Asylum, Downpatrick, on Residual Lunatics and Recent Legislation; Dr. F. W. Edridge-Green, London, on Evolution of the Colour Sense; Mr. E. D. O'Neill, medical superintendent, the Asylum, Limerick, on the Superannuation Question— its Effect on Asylum Officials, with Suggestions for further Legislation on the Subject. On Friday, July 26th, commencing at 10 A.M., Professor Dixon and Professor Bergin will read a paper on Stereoscopic Radiography and Dr. Joseph Shaw Bolton, Woodford Bridge, will give a lantern demonstration on Gross Lesions of the Cerebrum; Dr. George T. Revington, medical superintendent, Central Criminal Asylum, Dundrum, Ireland, will read a paper on Mental Conditions Resulting in Homicide; and Dr. W. C. Sullivan, H.M. Prison, Pentonville, London, will make a communication on Crime in General Paralytics. At 2 P.M. Dr. John Keay, medical superintendent, District Asylum, Inverness, will initiate a discussion on the Care of the Insane at Night; Dr. A. R. Urquhart, physician superintendent, James Murray's Royal Asylum, Perth, will deal with the Effect upon Patients of Changes of Asylums; Dr. Daniel F. Rambaut, assistant medical officer and pathologist, Richmond District Asylum, Dublin, will read a paper entitled a Case of Cerebral Hemiatrophy; and Mr. R. R. Leeper, resident physician, St. Patrick's Hospital, Dublin, will take for his subject Three Cases of Melancholia presenting Symptoms of Unusual Clinical Interest. The paper will be illustrated by microscopic specimens and photographs. The social arrangements include an "At Home Day" by the President, Dr. Oscar T. Woods, and Mrs. Oscar Woods, on Friday, July 26th, from four to seven o'clock at the District Asylum, Cork; and an excursion to Killarney on Saturday, July 27th. The annual dinner will take place at the Imperial Hotel, Cork, on Thursday, July 25th, at 8 P.M.; tickets £1 1s. each. The address of the honorary secretary is 11, Chandos-street, Cavendish-square, London, W.

THE LONDON SCHOOL NURSES SOCIETY.

THE annual report of the above society for the third year of its existence has just been issued. The object of it is to supply carefully trained nurses to inspect the children in London Board schools with regard to such infectious diseases as ophthalmia and "sore heads," whether the latter be due to tinea or pediculi or other forms of disease affecting the hairy scalp. We learn from the report that according to a statement by the chairman of the London School Board made on Oct. 4th, 1900, the society "sends qualified visiting nurses to the poorest schools to attend to the small ailments of the scholars on the principle that there is no more sure way of securing the health of the people than to arrest small ills at the beginning." We do not quite understand whether by the word "attend" the chairman meant "treat," or whether it is simply that if the nurse finds a child with sore head or eyes she should warn the mistress as well as the parents of the child that they should have the disease medically attended to. If the nurse prescribes treatment we should say that she was going beyond her duty, but if she simply acts as a kind of sanitary inspector we think that the work is worthy of all praise. We observe that the society is supported by voluntary contributions and that the number of schools visited regularly is 63, of which number six are apparently not under the School Board. The remaining 57 we gather are those under the Board and we cannot see why a body which demands by "precepts" a sum of over two millions out of the pockets of the ratepayers, a large proportion of which is wasted upon education which is by no means elementary, should not be able to supply the sum of £500 which, according to the report, is all that the London School Nurses Society needs. To provide means for the examination of sore eyes and sore heads is not nearly so romantic an occupation as issuing precepts for continuation schools and the higher grade education; it is, however, infinitely more useful and probably even that school board bogey Mr. Cockerton would not make a surcharge if the Board were to vote a contribution to the London School Nurses Society.

THE MIDWIVES BILL.

ON June 26th the eighth annual meeting of the Association for Promoting the Compulsory Registration of Midwives was held at 47, Cadogan-square. Lord Balfour of Burleigh, who moved the adoption of the report in his private and unofficial capacity, made a speech upon the matter which is dear to the heart of the association, which speech was reported in our issue of July 6th, p. 46. The association was advised to bring up the question again next session and there is not the slightest doubt that they will do so. We would remind our readers that with regard to this matter there must be no attitude of *laissez faire*. The promoters of the Bill are earnest men and women who know what they want. The medical profession, although some four-fifths of the English practitioners who would have been affected by the Bill introduced last year, had it passed, were against the Bill, yet do not seem to have any very clear idea of what they do want. There is a general consensus of opinion that the present state of matters, by which any woman, no matter how ignorant or unclean, may attend her sisters in childbed, is indefensible. But the difficulties of formulating an alternative and workable system are extreme. When Mr. Tatton Egerton's Bill passed its second reading, which it did on March 9th, 1900, we set ourselves to point out in our leading columns[1] the various modifications which we considered indispensable. As it turned out the Bill never arrived at the third reading and so never got a place upon the Statute Book. But the members of our profession should remember that the subject has by no means been dropped and that in all probability the next session of Parliament will see Mr. Tatton Egerton's Bill, or one very similar to it, introduced again.

A DEARTH OF ASSISTANT MEDICAL OFFICERS.

AT a meeting of the Metropolitan Asylums Board on Saturday, July 13th, the Hospitals Committee reported that owing to inadequate responses to advertisements they were experiencing considerable difficulty in filling vacancies in the medical staff of the hospitals service. The committee believed that the board were not singular in that difficulty, for they understood that the dearth of candidates was felt by many other authorities. The supply of qualified men was evidently falling short of the demand, and that fact appeared to be mainly accounted for (1) by raising the standard of the examinations; (2) by the extension of the students' curriculum to five years; and (3) by the substitution of qualified for unqualified medical men as assistants. Moreover, as was well known, a very large number of medical men had taken duty in South Africa in connexion with the war, many of whom would probably remain there. At the present time the committee were not in a position to suggest a remedy for the difficulty referred to, but with the busy season of the year upon them it was possible that an emergency might arise which would require to be dealt with in an exceptional way and they therefore felt it their duty to ask for the powers set forth in the following recommendation—viz.: "That during the period of the summer vacation special powers be given to the Hospitals Committee to deal in such manner as they may think

[1] THE LANCET, March 17th, 1900, p. 783.

necessary with any emergency that may arise in relation to medical attendance upon the infectious sick in the hospitals of the Board, a report being made to the Board by them upon any measures which they may have taken in pursuance of this authority." The recommendation was agreed to.

THE CHAIR OF PATHOLOGY IN THE UNIVERSITY OF SYDNEY, NEW SOUTH WALES.

As will be seen from a notice in our advertisement columns the chair of pathology in the University of Sydney is vacant and applications for it are invited. The salary, a fixed one, is £900 per annum and a pension of £400 per annum is allowed on certain conditions after 20 years' service. The sum of £100 will be allowed for passage expenses from Europe or America. The successful applicant is to begin his duties on March 1st, 1902. Further particulars may be obtained from the Agent-General for New South Wales, 9, Victoria-street, London, S.W., to whom applications, stating applicant's age (which must not be more than 40 years) and qualifications, and accompanied by four copies of each testimonial submitted, should be sent not later than Sept. 14th, 1901.

THE HOUSE OF LORDS AND THE EARLY CLOSING OF SHOPS.

THE report of the Select Committee of the House of Lords on the early closing of shops has just been issued. It is an instructive and important document though it can scarcely be said to convey any information of a novel character. Nevertheless its publication should be welcome as an effective reminder of a long-standing grievance for which reform is urgently needed. The Committee has satisfied itself that many shops still remain open from 80 to 90 hours a week; and even when the shops are closed there is still work to be done in packing goods, tidying, and making up the books. Eighty-four hours for a week of six days means 14 hours per day; and in 1888 the highest medical evidence was collected showing the injury of such long hours on the health, especially of young persons. On the present occasion this opinion has been repeated by the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England respectively. Sir William Mac Cormac further urged that the evil increased with time and, he said, "it is gradual and progressive in its effects, and it goes on, I am afraid, in a cumulative degree." More than 290 petitions or resolutions passed by tradesmen's associations were received in favour of the Early Closing Bill; the London pawnbrokers alone objected. While acknowledging that the early closing associations had effected some good by voluntary action the evil, it was maintained, could only be eradicated by legislation. It is the inmates of the smaller shops who suffer most, and these tradesmen are quite as anxious to close earlier as are the more well-to-do shopkeepers. Nor is there any evidence that such action on their part would greatly inconvenience the poorer class of purchasers. The representatives of trade unions, of co-operative stores, &c., have all borne witness in favour of early closing. It is generally felt that voluntary action has done all that it is ever likely to accomplish and that legislation merely regulating the hours of labour of shop assistants will not be effective, for so long as the shops remain open the work will continue. The report concludes by saying that the evidence collected clearly shows that the present hours are "grievously injurious to health," therefore early closing "would be an immense boon to the shopkeeping community, to shopkeepers and shop assistants alike." Consequently the Select Committee recommends that town councils should be authorised to pass provisional orders for the closing of shops in their districts. These orders should be confirmed by Parliament in the usual manner so as to acquire the force of law. Thus so far as it goes this report is satisfactory, but what will be done? As far back as 1886 the House of Commons appointed a committee to inquire into the same subject, and it likewise reported that the long hours were injurious and often ruinous to health, yet, as we have seen, the grievance and the injury still continue. Will the evidence now collected by the House of Lords Committee produce any better fruit?

GLASGOW UNIVERSITY CLUB, LONDON.

THE summer dinner of the Glasgow University Club, London, was held at the Café Royal, Regent-street, W., on July 10th. Lord Balfour of Burleigh presided and the company, which reached a total of 95, included the Bishop of Ripon, the Earl of Mansfield, the Lord Provost of Glasgow, Sir Henry Craik, and Mr. J. A. Campbell, Member of Parliament for the Universities of Glasgow and Aberdeen. After the loyal toasts Lord Balfour of Burleigh proposed the toast of "The Club." Speaking on the subject of Mr. Carnegie's benefaction to the four Scottish universities he said that one of the objects of this great gift was to insure that no undue obstacle should be placed in the way of a liberal education being brought within the reach of those who were likely to profit by it. Mr. Carnegie had devoted for all time a sum of £100,000 a year for the benefit of these universities. The first charge on the fund, as finally constituted, was a definite sum of £50,000 a year for strengthening the departments which had hitherto been least supported—modern languages, modern literature, engineering, and other subjects of that kind. The first claim upon the remaining £50,000 would be the payment of the fees of such of the students as might apply for that benefit. There were some who looked with misgiving on this latter part of the scheme, believing that it was better that the fees of students should be paid by themselves or by their friends and that adventitious support was likely in the long run to be injurious; but Mr. Carnegie had met this difficulty by inserting a clause in the trust-deed which would enable students in after-life to repay to the trust the sums which they had received from it, so that there need be no sacrifice of their independence. No examination would be made into the circumstances of applicants, and Lord Balfour believed that this great gift would be fraught with excellent consequences for university life in Scotland. In concluding he highly commended the services rendered to the club by Mr. Norman MacLehose, who has just retired from the position of one of the secretaries. Sir Henry Craik proposed "The City of Glasgow" and Lord Provost Chisholm replied. The toast of "The Guests" was proposed by Mr. J. A. Campbell, M.P., and acknowledged by the Bishop of Ripon and the Earl of Mansfield. The bill of fare included haggis as one of the courses.

THE ARMY MEDICAL SERVICE.

IT would seem that the proceedings of the Committee of Inquiry instituted and presided over by Mr. Brodrick, the Secretary of State for War, are not intended to be of the wide and extended nature that was at first supposed, but are to be circumscribed within comparatively narrow limits. The committee will, it is understood, mainly confine their attention to the Army Medical Service and the Royal Army Medical Corps, with a view to find out what is required to be done to render them popular and efficient by bringing them into harmony with the requirements of the medical schools and the medical profession. It is not intended apparently that the organisation and state of army hospitals generally,

or of those in South Africa in particular, should come within the scope of the investigation, although it is very likely that it may be found impossible to exclude these and other subjects from the inquiry. Mr. Brodrick has from the first expressed his intention of laying certain subjects and plans before a committee of experts for their consideration and advice, and it may well be that he seeks to put an end, once and for all, to future difficulties and dissensions by some bold, broad, and liberal scheme for creating the really good medical service which he has foreshadowed for the army of the future. The present Army Medical Service is organised on a purely military basis and it is possible, too, that with the aid of a number of civil hospital physicians and surgeons he may be seeking to devise a scheme by which scientific and professional attainments shall be more fully recognised in the army for reward in the future than they have been in the past, and that medical officers selected for the higher posts shall not only be good administrators but qualified to act as professional consultants in the districts and hospitals under their supervision. We shall see. Major-General Sir G de C. Morton, K.C.I.E., late Adjutant-General in India, Colonel Sir J. Willcocks, K.C.M.G., and Colonel Sir E. W. D. Ward have been added to the Committee. We still think that the Army Medical Service should have been more fully represented on the Committee, and the addition of the above three very able non-medical officers lends force to the protest to that effect which we have already raised. We trust, at all events, that some medical officer of experience with regard to administrative matters will have the opportunity of giving evidence if Mr. Brodrick does not see his way to make any further addition to the *personnel* of the Committee.

TEACHERS OF PUBLIC HEALTH IN LONDON AND THE CURRICULUM FOR THE DIPLOMA IN PUBLIC HEALTH.

AT a recently held meeting of teachers of public health in London the following resolution was passed with reference to the regulations laid down by the General Medical Council in December, 1900:—

That, in the opinion of this meeting of the teachers of public health in London, it is very desirable that a candidate for the diploma of Public Health should be required to attend a systematic course of three months' practical instruction in public health at a recognised school in lieu of three months' attendance with a medical officer of health. This course to run concurrently with those on bacteriology and chemistry. After this course the candidate should be required to attend day by day for three months with a medical officer of health and be associated with him in the discharge of his duties, routine and special, of public health administration.

The teachers consider that the regulations as laid down by the General Medical Council, even if they are not impracticable, will not produce as good results as would the scheme suggested by the teachers.

THE DRUNKARDS BILL.

So far as it goes the Drunkards Bill, which has now passed through the House of Lords, is calculated to prove distinctly beneficial as well to the inebriate himself as to the public. By its provisions the habitual drunkard convicted as such will be prohibited under penalties from purchasing intoxicating liquor on licensed premises for a term of three years. Licensees, on their part, will be liable if they knowingly sell, or permit the sale of, intoxicants to such a person. Of even greater importance from the social and domestic standpoint is the clause which allows the wife or husband of a habitual drunkard to obtain a separation order. Those who have been unfortunate enough to witness the misery and often hopeless ruin brought about in homes where the head is a drunkard will hail this clause as an earnest of domestic salvation. We would express a hope that in any case of separation under this Bill provision shall be made for such control of financial matters by responsible persons as shall insure the regular maintenance of those most nearly interested. The Bill further prohibits any person while drunk from taking charge of children under seven years of age. It provides that street drunkenness apart from disorder shall be treated as an indictable offence, and that publicans will be liable if they do not use their endeavours to prevent intoxication on licensed premises. It is to be hoped that in its progress through the House of Commons a measure which is now by no means oppressive will not from urgency of other business or from any other cause fail to receive that full consideration which it deserves.

THE PREVENTION OF CRUELTY TO CHILDREN.

The National Society for the Prevention of Cruelty to Children, as we learn from its latest annual report, has recently entered upon the thirteenth year of its existence. The last year's record is, on the whole, satisfactory. We may truly say that, except in so far as it still shows a certain, though not a great, excess of expenditure over income, it is a highly satisfactory record. The number of cases of cruelty inquired into was 2977 in excess of the number for the previous year. This fact at first sight does not suggest the most hopeful auguries. In reality it is not a sign of parental retrogression. It is rather to be taken as the latest high-water mark of the society's advancing and extending activity. Concurrently we learn that there has been a decrease in the number of reported cases of active ill-treatment, of exposure, of causing to beg, and of moral wrong. Still more encouraging is the statement, which is supported by the proof of recorded cases, that parents who formerly were cruel to their children have learned, even through the medium of punishment, the lesson of humanity. As the report rather quaintly puts it: "Something *better* in the experiences of the family has made the sacrifices of the new life worth while." In other cases a knowledge of the society's interest in children has acted as a deterrent upon callous and neglectful parents. Reformation of character is, as we have repeatedly stated, as much a primary object of the society's efforts as is the prevention of cruelty. It aims at so administering the powers intrusted to it by law that judicious common-sense will find its due exercise as well as the sometimes indispensable machinery of punishment. Here and there in the report complaint is made that local magistrates do not sufficiently avail themselves of the powers of correction intrusted to them but prefer to adopt a let-alone policy even where there is evidence of serious misdemeanour. In one case of culpable and fatal neglect a conviction was obtained on appeal to a higher court and the offending parent was severely punished. In other cases justices have shown themselves fully alive to the curative value of preventive legislation and have done all in their power to promote its objects. These evidences of divergence in legal opinion can only be the result of misunderstanding which a better acquaintance with the aims of the society and the unfortunate condition of social life in many families will go far to remove. A suggestion contained in the report contemplates the creation of a State Department which shall devote its energies to the protection of children's interests. We must confess that this proposal does not commend itself to our judgment. The State has already done much by framing a series of useful Acts all bearing upon this subject, and by so doing it has furnished the public with every reasonable means of redress. A national society exists which has proved itself abundantly capable of performing the duties of an authorised and disinterested protector. With these provisions in being and in operation we fail to see any adequate justification for a new arrangement which must inevitably

be relatively perfunctory in its character, unsympathetic, mechanical—in a word, official. We would rather leave well alone, and having powers of law employ these with the aid of self-help inspired by humanity and good sense.

THE CHEMISTRY OF ARTIFICIAL FLOWERS.

MANY persons have been rudely shocked to find that a flower for which perhaps they gave a considerable sum and which they took to be genuine proved subsequently to be artificial in every particular. Within our own experience not long ago the attention of a gentleman sitting at dinner was drawn to the fact that his shirt-front and coat were gradually being covered with streaks of a brilliant red colour. He was wearing a bright carnation in his button-hole which at quite a short distance, as it subsequently appeared, deceived perfectly. Even the perfume was admired. The "flower" had just been watered to freshen it and it was then seen that on the water-drops detaching themselves they were of a brilliant red colour while the "carnation" gradually assumed a faint variegated appearance owing to some of the colouring matter being washed out. General incredulity was expressed that, at first sight, the flower could be anything but real. A laboratory examination, however, soon brought the whole truth to light, and the results are remarkable and certainly a credit to the ingenuity of the designer. There was not the vestige of a carnation about it. The "flower" consisted of slices of turnip neatly cut and dyed with acid magenta; the stems and leaves were of twisted cloth dyed a dark green with chromium; the bloom was a very fine starch powder delicately dusted over the stems and leaves; and the support to the whole clever fabric was a concealed iron wire. A synthetic amber-coloured oil known as "*œillet*" completed the deception in giving a perfume wonderfully imitative of the genuine carnation. Altogether we can hardly conceive of a cleverer deceit and it is satisfactory to be able to add that so far as our observations went it is free from positive harm except to wearing apparel. On carefully searching the various materials for irritating substances and poisonous metals we could not obtain the slightest evidence that such were present. It is clearly possible, however, that the colours used for artificial flowers may contain substances injurious to health—such as, for example, arsenic.

THE QUANTITY OF WATER IN FOODS.

IT is not very generally realised how much water there is in solid food. Certain it is that no natural food is without water, varying in amount from 5 to 97 per cent., or only 3 per cent. short of pure water itself. Milk, of course, must be taken as the type of a complete food and yet it contains, even straight from the cow, very nearly 90 per cent. of water, or, to be more accurate, from 87 to 88 per cent. That is to say, more than four-fifths of milk consist of water, and as this is the condition in which it is naturally furnished the inference is that the fats, the sugars, and the proteids were intended to be taken in a diluted state. Indeed, the composition of other foods would teach the same thing, although, paradoxical as it may seem, some solid foods contain more water than does milk. This is especially true of vegetables and fruits. Thus the turnip contains over 90 per cent. of water, the cabbage nearly the same amount, and the cucumber and the vegetable marrow about 95 per cent.; whilst amongst fruits the strawberry contains nearly 90 per cent. of water, the apple 82 per cent., and grapes 80 per cent. Even the various meats used as food contain an amount of water far in excess of the amount of solid constituents. Thus three-fourths of beef and mutton consist of water. The housekeeper, perhaps, scarcely realises when consulting the butcher's price-list that three-fourths of the meat are water and are paid for with the rest at the rate of a shilling or more per pound. Lamb contains less water, namely 64 per cent., pork still less, 60·9 per cent., and bacon only 22·3 per cent. It would appear that as the flesh foods increase in the amount of fat the proportion of water, as a rule, diminishes. Coming to birds, the flesh of the fowl and duck contains about 70 per cent. of water and that of the pigeon 75 per cent., while the flesh of the goose contains only 38 per cent., the last being another example of the fat increasing with a corresponding diminution in the proportion of water. Fishes contain from 40 to 80 per cent. of water. The egg, one of the most powerful of nutritives, contains 65·5 per cent. of water, the white consisting of 86 per cent. and the yelk of 50·9 per cent. The latter, of course, is the more nourishing part. As a rule foods containing a small proportion of water are not fit for human consumption until they are cooked, which commonly means reducing them to a digestible state by adding water and boiling or baking, and so when they are actually partaken of they contain a good percentage of water. Wheat flour, for example, contains only 12 per cent. of water, while bread contains nearly 50 per cent. It would appear to be necessary, therefore, that food should be in a decidedly moist condition before it is fit for use, and thus water plays a rôle in food which at first sight perhaps does not seem evident. Bacteria cannot live or act except under a wet environment and chemical change under absolutely dry conditions is impossible; therefore without moisture life would cease and the great vital processes would come to an end.

THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MR. HENRY GREENWAY HOWSE was on July 11th elected President of the Royal College of Surgeons of England. Mr. Howse was a student of Guy's Hospital, whence he qualified with the Membership of the Royal College of Surgeons of England in 1865. He obtained the M.B. of London in the following year, and the Fellowship of the Royal College of Surgeons of England and the M.S. of the University of London in 1868. Mr. Howse has been a member of the surgical staff of Guy's Hospital for many years and he is now the senior surgeon and the lecturer on surgery. He has contributed numerous papers on various surgical subjects to Guy's Hospital reports, to the Transactions of the societies, and to the medical journals. We offer him our congratulations on the honour conferred upon him.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM received at the Colonial Office from the Governor of Mauritius on July 12th states that for the week ending July 11th two fatal cases of plague had occurred. At Hong-Kong for the week ending July 13th there had been 26 cases of plague with 21 deaths. With regard to the plague cases in the lazaretto at Frioul our Paris correspondent writes: "The daily press has been making a great fuss about seven cases of plague which have occurred on board the transport *Laos* among the Arabs whom the ship had embarked at Djibouti on her return from Cochin. The matter is of but little importance. In all 15 cases occurred among the Arabs, one case being landed at Port Said. On arrival at Marseilles the ship was isolated at Frioul, the passengers were placed in quarantine, and the Arabs put on board a hulk which was also isolated. There were three deaths. All the passengers and the medical staff attending them were inoculated with Calmette's serum. The Arabs at first refused inoculation and only consented after the death of one of their number. No new case has occurred and the passengers and returned

troops are shortly to be allowed to go free. There is no other centre of infection in Marseilles, all infection being confined to Frioul, and despite the great heat the death-rate is no higher than is usual at this time of the year. The incident affords proof of how carefully organised is the Marseilles Sanitary Department and what good security it offers against Europe being invaded by plague through that port." During the week ending July 7th fourteen cases of plague and seven deaths from the disease have been notified throughout all Egypt. Nine of these cases and six deaths have occurred at Zagazig, three cases and one death at Alexandria, and two cases at Port Said. Eleven of the cases occurred among natives and three among Europeans (all Greeks). A Greek youth, aged 18 years, employed in a baker's shop in the European quarter of Port Said, was admitted into hospital on July 4th with typical symptoms of plague. Dr. Baker, the sanitary inspector, examined the inmates of the surrounding houses, and found in the next house, occupied as a grocer's shop, a Greek boy, aged 13 years, suffering from similar symptoms. This boy also was immediately isolated and the whole quarter was thoroughly disinfected.

THE Council of the Royal Society has awarded the Mackinnon Studentship to Mr. J. J. R. Macleod, M.B. Aberd., Demonstrator of Physiology in the London Hospital Medical College, for the purpose of enabling him to carry out researches in pathological chemistry. The studentship is founded under a bequest to the Royal Society by the late Sir William Mackinnon, Director-General of the Medical Department of the Army, for the foundation and endowment of prizes or scholarships for the special purpose of furthering natural and physical science, and of furthering original research and investigation in pathology. The studentship is of the annual value of £150. There were 14 applications for the studentship.

THE King held an Investiture at Marlborough House on July 16th, when the honour of Knight Commander of the Royal Victorian Order was conferred upon the following gentlemen:—Sir Thomas Smith, Bart., F.R.C.S. Eng.; Deputy Surgeon-General Henry Julius Blanc; and Mr. William Henry Bennett, F.R.C.S. Eng. The following gentlemen were invested with the Insignia of Commanders of the Order:—Mr. Donald William Charles Hood, M.D. Cantab.; Mr. John Hammond Morgan, F.R.C.S. Eng., and Mr. Charles Arthur Morris, F.R.C.S. Eng.

WE are sure that we are only giving expression to the feeling of the whole of the medical profession in offering our sympathy to Sir Richard Douglas Powell in the sorrow which has fallen upon him by the death of his son, Lieutenant Charles Folliott Borradaile Powell of the Mounted Infantry, Yorkshire Light Infantry, who was killed at Rietfontein on July 13th. Lieutenant Charles Powell was the second son of his father; his elder brother, of the Royal Welsh Fusiliers, is now serving in South Africa.

IN regard to the case of Stocks and Crossman *v.* Watson, upon which we commented in a leading article published in our issue of July 13th (p. 91), we think it right to say that the interests of the medical men who were successful on the claim and counter-claim in this action were looked after by the British Medical Protection Society.

THE new Dental Hospital of London, Leicester-square, has received a legacy of £1000 under the will of the late Miss Hannah Harvie of Cheltenham.

THE BRITISH CONGRESS ON TUBERCULOSIS.

THE British Congress on Tuberculosis will be opened on Monday, July 22nd. It will be inaugurated by the president, the Duke of Cambridge, on behalf of the King, who is patron of the Congress and who is deeply interested in its work. The headquarters of the Congress are at the Queen's Hall, Langham-place, W., but the opening meeting will take place in St. James's Hall, Piccadilly, at 3 P.M. on July 22nd, and two other general meetings will be held at the same place and hour on July 23rd and 24th. On July 25th a fourth general meeting will be held in the Queen's Hall, where on the following day the Congress will be closed by a final general meeting. There are to be four sections of the Congress. Section I. will be the State and Municipal section, and will meet daily at St. George's Hall, Langham-place, W.; Section II. is to deal with Medicine, including Climatology, and its meetings will be held in the large hall of the Royal Medical and Chirurgical Society, 20, Hanover-square, W.; Section III., for Pathology, including Bacteriology, will meet at the Queen's Hall; and Section IV., the Veterinary section, will hold its meetings in the Marlborough Hall, adjoining the Polytechnic, Regent-street, W. In each case the meetings will last from 9.30 A.M. to 1.30 P.M. There will be a museum in connexion with the Congress, and this will be located at the Queen's Hall and will be open daily.

The Congress will consist of honorary members, delegates, and members. Honorary members will be persons nominated by any foreign Government or university, or by the executive committee; delegated and ordinary members will be other persons, British, colonial, or foreign, who may wish to attend, including representatives from Governments or institutions within the British Empire. Delegated and ordinary members will receive their cards on forwarding the sum of £1 to the secretary-general of the Congress, 20, Hanover-square, W. Arrangements have been made with all the principal railway companies in Great Britain to issue tickets to the members of the Congress at a fare and a quarter for the return journey, available from July 20th to July 29th inclusive. These tickets are obtainable from the booking clerks at all important railway-stations on production of a certificate signed by the secretary of the reception committee which will be posted at the same time as the Congress ticket to all those who subscribe and enrol themselves as members. The Queen's Hall, Langham-place, will be open as a general reception-room and central bureau for the registration of delegates and members, the distribution of Congress tickets, and for the reception of applications for special entertainments. The reception-room will be open on Saturday, July 20th, from 10 A.M. to 1 P.M., for registration of names and distribution of tickets. It will also be open between these hours on Sunday, July 21st, for the convenience of members from a distance. On Monday, July 22nd, the Queen's Hall will be open from 9.30 A.M. to 5 P.M. for registration and distribution of tickets and from 9 P.M. to midnight there will be a reception here by the president of the council and the executive officers of the Congress.

On Tuesday, July 23rd, the sections will begin their work, and at the second general meeting on the afternoon of this day Professor R. Koch of Berlin will give an address. The chair will be taken by Lord Lister. From 9 o'clock to 12 on the same evening the Lord Mayor and Lady Mayoress will hold a reception at the Mansion House. On Wednesday, July 24th, there will be in the morning, at 20, Hanover-square, a joint meeting of the Sections of Medicine and Pathology for a discussion on Tuberculin. Professor Brouardel of Paris will address the third general meeting in the afternoon. At this meeting Mr. Henry Chaplin, M.P., will be the chairman. From 4.30 to 7 P.M. a garden party will be given by the ladies' reception committee in the Royal Botanic Gardens, Regent's Park. The fourth general meeting, to be held on Thursday, July 25th, will be addressed by Professor McFadyean, of the Royal Veterinary College, and Lord Spencer will preside. From 4.30 to 5.30 P.M. the council of the Sanitary Institute will hold a reception at the Parkes Museum of Hygiene, and from 9.30 P.M. to 12 a reception will be given by the Earl and Countess of Derby at the Victoria and Albert Museum. On Friday, July 26th, Lord Derby will preside at the final meeting of the Congress. Sir J. Whittaker Ellis

will give a river party at Richmond on the same afternoon, and in the evening the foreign vice-presidents and foreign delegates will be entertained at dinner at the Hotel Cecil. On Saturday, July 27th, from 4 to 7 P.M., the Duke and Duchess of Northumberland will give a garden party at Syon House.

The papers to be read at the Congress will practically cover the whole field of the subject of tuberculosis. In Section I. "The Statistical Aspect of Tuberculosis" will be considered first. Then will follow "The Notification of Tuberculosis," "The Prevention of Tuberculosis during Childhood," "The Influence of Housing and Aggregation," "The Control of Meat Supplies," "The International Aspects of Tuberculosis," "The Control of Milk-supplies," "The Provision of Sanatoria," and "The Rôle of Hospitals and Dispensaries for Consumption in the Prevention of Phthisis." In Section II. there will be a discussion on the question, "What Influence has Climate on the Treatment of Consumption, and how far can cases be grouped for Treatment in Certain Climates?" This will be followed by discussions on "The Therapeutic and Diagnostic Value of Tuberculin in Human Tuberculosis," and "Sanatoria for Consumption." Section III. will consider "The Morphological and Physiological Variations of the Bacillus Tuberculosis and its Relations (*a*) to other acid-proof Bacilli, (*b*) to the Ray Fungus and other Streptothrices," "The Varieties of Tuberculosis (Morbid Anatomy and Histology)," and "Mixed Infection in Tuberculosis." Section IV. will discuss "The Diagnosis of Tuberculosis in Animals during Life," "Tuberculosis and the Milk Supply," "Tuberculosis and the Meat Supply," and "The Legislative and other Measures necessary to combat Tuberculosis amongst Animals." A large number of papers dealing with these questions will be read by recognised authorities.

The following are the principal officers of the Congress: President of Organising Council, the Earl of Derby; Chairman of Organising Council, Sir William Broadbent, F.R.S.; Chairman of General Purposes Committee, Professor Clifford Allbutt, F.R.S.; Chairman of Reception Committee, Sir James Crichton Browne, F.R.S.; Chairman of Finance Committee, Sir James Blyth; Hon. Treasurers, Lord Avebury and Sir James Blyth; Hon. Secretary-General, Mr. Malcolm Morris; President of Ladies' Reception Committee, the Countess of Derby; Hon. Foreign Secretary, Dr. StClair Thomson; Hon. Secretary of Reception Committee, Dr. Alfred Hillier; Hon. Secretary of Museum Committee, Dr. W. Jobson Horne; Hon. Secretary of Architectural Section of Museum, Mr. Thomas W. Cutler; Hon. Assistant-Secretary, Sir Arthur Trendell, C.M.G. The following are the presidents of sections: Section I., Sir Herbert Maxwell, M.P., F.R.S.; Section II., Sir R. Douglas Powell; Section III., Professor Sims Woodhead, F.R.S. Edin.; Section IV., Sir George Brown, C.B.

COMPLIMENTARY DINNER TO SURGEON-GENERAL JAMESON, C.B.

MR. G. LENTHAL CHEATLE, one of the honorary secretaries, has sent us the following list of names to be added to those which we published in our issue of July 6th, 1901, as those of members of the medical profession and others who wish to do honour to the late Director-General of the Army Medical Service:—Sir George Philipson, Surgeon-General A. F. Preston, Surgeon-General J. B. C. Reade, C.B., Surgeon-General Martin, Surgeon-General A. C. C. De Renzy, C.B., Dr. H. H. Tooth, C.M.G., Dr. Conan Doyle, Dr. Dudley Buxton, Mr. Woodhouse Braine, Mr. Thomas Wakley, jun., and Dr. H. Tilley. The dinner will be held at the Hotel Cecil on Wednesday, July 24th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6483 births and 3439 deaths were registered during the week ending July 13th. The annual rate of mortality in these towns, which had been 14·8 and 15·1 per 1000 in the two preceding weeks, further rose to 15·6 per 1000 last week. In London the death-rate was 14·2, while it averaged 16·6 in the 32 large provincial towns. The lowest death-rates in these towns were 9·4 in Halifax, 10·1 in Croydon and in Plymouth, 10·3 in Derby, and 10·6 in Bristol; the highest rates were 20·0 in Portsmouth, 21·2 in Preston, 25·9 in Liverpool, and 26·7 in Birkenhead. The 3439 deaths in these towns last week included 567 which were referred to the principal zymotic diseases, against 399 and 431 in the two preceding weeks; of these, 297 resulted from diarrhœal diseases, 95 from measles, 63 from diphtheria, 53 from whooping-cough, 41 from scarlet fever, 16 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases was registered last week in Brighton or in Halifax; in the other towns they caused the lowest death-rates in Croydon, Norwich, and Huddersfield, and the highest rates in Portsmouth, Sheffield, Liverpool, and Birkenhead. The greatest mortality from measles occurred in Gateshead and Birkenhead; from whooping-cough in Swansea and Bradford; and from diarrhœal diseases in Leeds, Portsmouth, Sheffield, Liverpool, and Birkenhead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns The 63 deaths from diphtheria in the 33 towns included 24 in London, six in Liverpool, five in Manchester, four in Leicester, and four in Leeds. One fatal case of small-pox was registered in Liverpool, but not one in any of the other 32 towns; six small-pox patients were admitted into the Metropolitan Asylums hospitals during the week, and 12 remained under treatment on Saturday, July 13th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2918, against numbers increasing from 1522 to 2895 on the 11 preceding Saturdays; 324 new cases were admitted during the week, against 369, 408, and 363 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 141 and 165 in the two preceding weeks, fell again last week to 133, and were 44 below the corrected average. The causes of 20, or 0·6 per cent., of the deaths in the 33 towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leeds, Sheffield, Nottingham, Bradford, and in 15 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool and in Portsmouth.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·3 and 19·0 per 1000 in the two preceding weeks, fell again to 17·2 per 1000 during the week ending July 13th, and showed an excess of 1·6 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·5 in Aberdeen and 12·7 in Leith to 23·6 in Greenock and 24·2 in Dundee. The 549 deaths in these towns included 29 which were referred to diarrhœa, 22 to measles, 22 to whooping-cough, seven to scarlet fever, six to "fever," two to diphtheria, and one to small-pox. In all, 89 deaths resulted from these principal zymotic diseases last week, against 86 and 81 in the two preceding weeks. These 89 deaths were equal to an annual rate of 2·8 per 1000, which was 0·2 per 1000 above the zymotic death-rate last week in the 33 large English towns. The fatal cases of measles, which had been 25 in each of the three preceding weeks, declined last week to 22, and included 14 in Glasgow and six in Dundee. The deaths from whooping-cough, which had declined from 44 to 25 in the three preceding weeks, further fell last week to 22, and included 14 in Glasgow and six in Edinburgh. The deaths from diarrhœa, which had been 13, 24, and 19 in the three preceding weeks, rose to 29 last week, and included 15 in Glasgow, five in Dundee, and three in Edinburgh. The deaths from scarlet fever, which had been seven in the two preceding weeks, were last week again seven, of which five occurred in Glasgow, where the two deaths from diphtheria and the one death from small-pox were registered. The six deaths from fever last week showed an increase of five, and included two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 95 in each of the two preceding weeks, fell last week to 75, and showed an excess of four over the number in the corresponding period of last year. The causes of

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JUNE, 1901.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1901.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœal diseases.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,543,757	4	1619	856	2	178	5	12	303	1	2980	8·5	1	165	63	64	116	1	16	—	90	516	1·5	4662	13·4	103
West Districts.																										
Paddington	144,154	—	34	27	—	11	—	1	9	—	82	7·4	—	—	1	1	2	—	1	—	2	7	0·6	118	10·7	93
Kensington	176,787	—	42	12	—	2	1	1	13	—	71	5·2	—	2	—	1	2	1	—	—	1	7	0·5	151	11·1	64
Hammersmith	112,619	—	30	17	—	6	—	—	6	—	59	6·8	—	—	1	3	8	—	—	—	3	15	1·7	98	11·3	143
Fulham	138,426	—	61	27	—	2	—	1	5	—	96	9·0	—	—	2	—	7	—	—	—	4	13	1·2	117	11·0	112
Chelsea	73,879	—	13	9	—	2	—	—	4	—	28	4·9	—	2	1	—	1	—	—	—	1	5	0·9	79	13·9	79
City of Westminster	182,502	—	42	19	—	9	—	—	6	—	76	5·4	—	5	1	2	4	—	—	—	3	15	1·1	184	13·1	103
North Districts.																										
St. Marylebone	133,060	1	28	28	—	6	—	—	16	—	79	7·7	1	—	2	2	2	—	1	—	2	10	1·0	151	14·8	74
Hampstead	82,237	—	18	8	—	3	—	—	4	—	33	5·2	—	—	—	1	—	—	—	—	1	2	0·3	56	8·9	34
St. Pancras	235,297	1	22	61	—	12	—	—	23	—	179	9·9	—	8	1	8	9	—	1	—	10	37	2·0	271	15·0	138
Islington	335,325	—	90	55	1	16	1	2	19	—	184	7·2	—	6	3	7	6	1	—	—	2	24	0·9	321	12·5	86
Stoke Newington	51,328	—	9	4	—	1	—	—	3	—	17	4·3	—	—	—	1	1	—	1	—	2	5	1·3	32	8·1	66
Hackney	219,780	1	105	79	—	11	—	1	18	—	215	12·8	—	5	2	5	4	—	1	—	1	18	1·1	209	12·4	88
Central Districts.																										
Holborn	59,205	—	28	11	—	—	—	—	2	—	41	9·0	—	5	1	1	3	—	—	—	—	10	2·2	80	17·6	131
Finsbury	101,253	—	54	24	—	3	—	—	10	—	91	11·7	—	3	4	1	4	—	—	—	3	15	1·9	136	17·5	104
City of London	26,527	—	15	5	—	2	—	—	1	—	23	11·3	—	—	1	—	—	—	—	—	1	2	1·0	39	19·1	114
East Districts.																										
Shoreditch	118,564	—	84	22	—	8	—	—	8	—	122	13·4	—	5	6	2	—	—	1	—	7	21	2·3	157	17·3	132
Bethnal Green	129,700	—	85	46	—	11	1	1	18	—	162	16·3	—	3	3	3	4	—	1	—	3	17	1·7	126	12·7	88
Stepney	298,284	1	114	70	1	9	—	—	15	—	210	9·2	—	32	9	1	4	—	1	—	11	58	2·5	387	16·9	99
Poplar	168,887	—	48	43	—	15	—	1	9	—	116	9·0	—	10	3	2	10	—	1	—	6	32	2·5	185	14·3	116
South Districts.																										
Southwark	206,219	—	140	41	—	8	—	—	14	—	203	12·8	—	14	6	2	7	—	3	—	4	36	2·3	288	18·2	140
Bermondsey	130,348	—	97	28	—	1	—	—	11	—	137	13·7	—	14	3	4	2	—	—	—	2	25	2·5	166	16·6	111
Lambeth	302,460	—	86	27	—	11	1	—	15	1	141	6·1	—	10	3	3	9	—	1	—	7	33	1·4	337	14·5	99
Battersea	169,364	—	36	21	—	8	—	1	11	—	77	5·9	—	9	1	1	4	—	1	—	4	20	1·5	135	10·4	97
Wandsworth	233,943	—	52	25	—	5	—	—	13	—	95	5·3	—	7	1	3	5	—	—	—	3	19	1·1	192	10·7	122
Camberwell	259,897	—	103	63	—	10	—	—	22	—	198	9·9	—	9	3	4	5	—	1	—	3	25	1·3	257	12·9	103
Deptford	110,732	—	37	29	—	—	—	—	9	—	75	8·8	—	5	3	—	4	—	1	—	1	14	1·6	111	13·1	94
Greenwich	96,188	—	24	12	—	1	—	—	9	—	46	6·2	—	9	1	1	7	—	—	—	1	19	2·6	82	11·1	101
Lewisham	128,423	—	37	19	—	2	—	—	2	—	60	6·1	—	2	—	2	1	—	—	—	1	6	0·6	102	10·4	102
Woolwich...	117,619	—	25	24	—	3	1	3	7	—	63	7·0	—	—	1	3	1	—	—	—	1	6	0·7	95	10·5	90
Port of London	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

23, or more than 5 per cent., of the deaths in these towns last week were not certified.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been 18·2 and 20·7 per 1000 in the two preceding weeks, further rose to 21·0 during the week ending July 13th. During the past four weeks the death-rate has averaged 20·0 per 1000, the rates during the same period being 14·1 in London and 16·9 in Edinburgh. The 151 deaths of persons belonging to Dublin registered during the week under notice were two more than the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against five and seven in the two preceding weeks; of these four resulted from whooping-cough, four from diarrhœa, one from scarlet fever, and one from diphtheria. These 10 deaths were equal to an annual rate of 1·4 per 1000, the zymotic death-rate during the same period being 1·9 in London and 1·8 in Edinburgh. The deaths from whooping-cough and from diarrhœa showed an excess over the numbers recorded in recent weeks. The 151 deaths in Dublin last week included 26 of infants under one year of age and 32 of persons aged upwards of 60 years; the deaths of infants showed an increase, and those of elderly persons a decline from the numbers in recent weeks. Three inquest cases and two deaths from violence were registered; and 53, or more than one-third, of the deaths occurred in public institutions. The causes of eight, or more than 5 per cent., of the deaths in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING JUNE, 1901.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the 29 cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 8·5 per 1000 of the population, provisionally estimated at 4,543,757 persons in the middle of the year. In the three preceding months the rates had been 5·3, 5·2, and 8·5 per 1000 respectively. The rates were considerably below the average in Chelsea, Kensington, the City of Westminster, Hampstead, Stoke Newington, and Wandsworth, while they showed the largest excess in Hackney, Finsbury, Shoreditch, Bethnal Green, Southwark, and Bermondsey. Four cases of small-pox were notified in London last month; of these, one belonged to St. Marylebone, one to St. Pancras, one to Hackney, and one to Stepney. Five small-pox patients were admitted into the Metropolitan Asylums during the month, and five remained under treatment on Saturday, June 29th. The prevalence of scarlet fever was slightly less excessive than in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in the City of London, Shoreditch, Bethnal Green, Southwark, and Bermondsey. The Metropolitan Asylums Hospitals contained 2752 scarlet fever patients at the end of June, against 1533, 1491, and 2291 at the end of the three preceding months; the weekly admissions averaged 343, against 142, 179, and 339 in the three preceding months. The prevalence of diphtheria showed a further increase upon that recorded in any recent month; the greatest proportional prevalence of this disease occurred in St. Pancras, Hackney, Finsbury, Bethnal Green, Stepney, Poplar, and Camberwell boroughs. There were 1169 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of June, against 1084, 960, and 1101 at the end of the three preceding months; the weekly admissions averaged 175, against 134, 117, and 160 in the three preceding months. Enteric fever was slightly more prevalent than in the preceding month; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in Paddington, Hammersmith, Shoreditch, Bethnal Green, and Poplar. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 162, 121, and 95 at the end of the three preceding months, had risen again to 125 at the end of June; the weekly admissions averaged 25 last month, against 18, 16, and 14 in the three preceding months. Erysipelas was proportionally most prevalent in St. Marylebone, St. Pancras, Finsbury, Bethnal Green, Bermondsey, and Greenwich. The 12 notified cases of puerperal fever included three in Woolwich and two in Islington.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the various boroughs in which the deceased persons had previously resided. During the four weeks ending June 29th the deaths of 4662 persons were registered, equal to an annual rate of 13·4 per 1000, against 18·2, 17·6, and 15·4 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 8·1 in Stoke Newington, 8·9 in Hampstead, 10·4 in Battersea and in Lewisham, 10·5 in Woolwich, and 10·7 in Paddington and in Wandsworth; the highest rates were 16·9 in Stepney, 17·3 in Shoreditch, 17·5 in Finsbury, 17·6 in Holborn, 18·2 in Southwark, and 19·1 in the City of London. During the four weeks of June 516 deaths were referred to the principal zymotic diseases; of these one resulted from small-pox, 165 from measles, 63 from scarlet fever, 64 from diphtheria, 116 from whooping-cough, one from typhus, 16 from enteric fever, 90 from diarrhœal diseases, and not one from any ill-defined form of continued fever. The lowest death-rates last month from these diseases occurred in Paddington, Kensington, Hampstead, Lewisham, and Woolwich; and the highest rates in Shoreditch, Stepney, Poplar, Southwark, Bermondsey, and Greenwich. The fatal case of small-pox was that of a person belonging to St. Marylebone. The 165 deaths from measles showed a marked decline from the average number in the corresponding periods of the 10 preceding years; this disease was proportionally most fatal in Holborn, Stepney, Poplar, Southwark, Bermondsey, and Greenwich. The 63 fatal cases of scarlet fever nearly corresponded with the corrected average number; among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Finsbury, Shoreditch, Stepney, Southwark, Bermondsey, and Deptford. The 64 deaths from diphtheria showed a decline of 84 from the average number in the corresponding periods of the 10 preceding years; this disease showed the highest proportional fatality in Hammersmith, St. Pancras, Bethnal Green, Bermondsey, and Woolwich. The 116 fatal cases of whooping cough showed a considerable decline from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Fulham, Holborn, Poplar, and Greenwich. The 17 deaths from "fever" were about one-half the average number in the corresponding periods of the 10 preceding years; the highest "fever" death-rates occurred in Stoke Newington, Shoreditch, Bethnal Green, Southwark, and Deptford. The 90 deaths from diarrhœal diseases were 70 less than the corrected average number; among the various metropolitan boroughs the proportional mortality from this cause was highest in St. Pancras, Stoke Newington, Shoreditch, Stepney, and Poplar. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during June was nearly 39 per cent. below the average. Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 103 per 1000. The lowest rates of infant mortality were recorded in Kensington, Chelsea, St. Marylebone, Hampstead, and Stoke Newington, and the highest rates in Hammersmith, St. Pancras, Holborn, Shoreditch, Southwark, and Wandsworth.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeon J. Andrews to the *Vor*, on commissioning for the manœuvres.

ROYAL ARMY MEDICAL CORPS.

Lieutenant Steele is placed under orders for South Africa. Major G. H. Barefoot has assumed command of the Depôt at Aldershot. Surgeon-Lieutenant T. G. McAllum, M.M.S.C., and Lieutenant S. F. Briggs, M.M.S.C., are attached to the Cambridge Hospital, Aldershot, for duty. Lieutenant-Colonel A. Young (r.p.) is selected for employment at Perth. Lieutenant C. R. Evans holds himself in readiness to embark for India. Surgeon-Lieutenant J. R. Bibby, 1st Gloucestershire Volunteer Artillery, has joined at Aldershot for a month's course of instruction. Major Patrick Maurice Carleton retires on retired pay. Dated July 19th, 1901. Lieutenant

James Barkley resigns his commission. Dated July 17th, 1901. Civil Surgeon Ernest George Ffrench to be Lieutenant. Dated May 28th, 1901. Lieutenant-Colonel R. W. Barnes (retired) is granted the local rank of Colonel while in charge of a general hospital in South Africa. Dated June 8th, 1900.

VOLUNTEER CORPS.

Rifle: 2nd (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant-Colonel M. H. Taylor resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. Dated July 13th, 1901. 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment): James Hamilton to be Surgeon-Lieutenant. Dated July 13th, 1901.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies:—Francis James Charteris to be Surgeon-Lieutenant. Dated July 13th, 1901. John Thomson Kilpatrick Thomson to be Surgeon-Lieutenant. The Woolwich Companies: Surgeon-Captain C. H. Hartt to be Surgeon-Major. Dated July 13th, 1901.

VITAL STATISTICS OF THE DUTCH NAVY FOR THE YEAR 1899.

Home stations:—Average strength, 4418; admissions to hospital, 1019 per 1000, including 221 per 1000 on account of venereal and skin affections; death-rate, 2·5 per 1000. East Indian possessions:—Europeans: strength, 2365; admissions, 1748 per 1000, including 583 per 1000 on account of endemic diseases (chiefly paludal), and 350 per 1000 on account of venereal affections; death-rate, 7·1 per 1000. Natives: strength, 920; admissions, 1180 per 1000; death-rate, 9·7 per 1000. Various foreign stations:—Strength, 1652; admissions, 1220 per 1000; death-rate, 1·2 per 1000. The mortality on home service seems very low, but the above figures do not represent the whole of it. In the following towns—Willemsoord, Amsterdam, Helvoetsluis, Rotterdam, Leyden, and Flushing—there are hospitals to which the wives and children of men belonging to the navy are admitted as well as the husbands and fathers, and apparently the statistics referring to the latter are excluded from the general table. The number of patients (men, women, and children) treated in these establishments during the year was 4523, and amongst them there were 55 deaths. In addition to statistics the report contains a variety of miscellaneous information. At Leyden the medical officer in charge vaccinated eight children aged respectively from seven months to three and a half years. It is customary in the Netherlands to insert the lymph in 10 separate places, and in the present instance the whole 80 punctures were attended by well-developed pustules. The same officer revaccinated 258 adults, but as in revaccination only five punctures are usual the total number of these was 1290. The results were certainly remarkable, 43 per cent. of the punctures were followed by pustules which are said to have been characteristic. In about 25 per cent. of the cases, however, lymphangitis and adenitis likewise supervened, while in 5·4 per cent. more there was "peri-vaccinal erythema." In an interesting appendix Dr. van Dewenter gives an account of his anthropometric investigation of 283 naval cadets, aged from 13½ years to 16½ years. It would seem to be one of the sequelæ of the training which these young men undergo that they should fail to become long-headed! Each year their crania increase about two centimetres in circumference, but it is "the transversal diameter which augments rather than the frontal." Dr. van Dewenter's communication is plentifully illustrated by diagrams and tables.

AFFAIRS IN SOUTH AFRICA.

There is, we regret to say, a good deal of sickness at the front, in addition to the casualties that occurred at Vlakfontein, about which and the alleged murder of some of our wounded so much stir has arisen. The list of those dangerously ill, and mainly from that army scourge enteric fever, is a long one. The death-rate among the Boer women and children in the concentration camps was a lamentably high one, but an improvement, has, we are glad to say, taken place in this respect. The sickness and suffering which war inevitably entails upon the powerless and innocent are indeed deplorable, but Mr. Kruger and his advisers should surely have thought of all that before thrusting war upon this country. What with the official publication of papers relating to the negotiations between Lord Kitchener and Commandant-General Botha, with the strong side-lights thrown upon them by the papers captured by Sir Bindon Blood, the statements in Parliament, and the appearance of Mr. E. T. Cook's book on the "Rights and Wrongs of the Transvaal War," there should be no lack of evidence and material on which to form an opinion about it. We know now about as much as is to be known as to the causes which led to it, the preparations which were made for its occurrence by the Boer Government, and the determination on the part of Mr. Kruger and the hostile commanders to continue it until their terms, and not those of this country, are granted. They really abate no jot of the demands which they made when they delivered their ultimatum and followed it up by invading our territories at the beginning of the war in 1899. That is really, when summarily and dispassionately stated, the present position of affairs, and it seems to cut the ground from beneath the feet of those who are advocating a policy of conciliation, the fact being that Mr. Kruger and the Boers, so far from regarding themselves as beaten, proclaim that they are as hopeful of success and as determined on maintaining their independence as ever they were. We have learned one thing, at any rate, in the present case—that the capture and annexation of territories and their capitals are not tantamount to the submission and subjection of the population: they are by no means conterminous results. Where the irreducible minimum which a foe will accept is what in the opinion of the other side is not even an admissible subject in any discussion about terms there is obviously only one course open—namely, to go on with the fighting—and this, in the opinion of most people in this country and the colonies, will have to be done if the integrity of the British Empire is to be maintained. The Boers are losing every week men, horses, rifles, and ammunition which cannot be replaced and the process, if slow, is still one of steady disintegration of their forces. As regards their attacks on trains it has been shrewdly suggested that a batch of Boer prisoners should in future be put in the foremost trucks or carriages of every train, and as regards the relief and aid of families in concentration camps there were both common-sense and humour in the inquiry of someone in the body of a meeting whether Mr. Kruger, who held the money-bags, had been asked to subscribe. According to the last detailed statement of British casualties published by the War Office there have been 16,717 deaths since the beginning of the war up to the end of last month, and the actual reduction of the force through the war from all causes amounts to 20,416.

DEATHS IN THE SERVICES.

Inspector-General of Hospitals and Fleets Thomas Henry Knott, R.N., on July 5th, aged 59 years. He entered the Navy in 1867, was promoted to Staff Surgeon in 1872, to Fleet Surgeon in 1883, to Deputy Inspector-General in 1892, and to Inspector-General in 1898.

Deputy Inspector-General Thomas Beswick Purchas, R.N. (retired), on July 6th, aged 76 years. He entered the Navy in 1847 as assistant surgeon to Her Majesty's ship *President*, stationed at Cape Town. In 1857 he became Staff Surgeon, previously to which he was Surgeon to the *Flying Fish*, one of the squadron that accompanied His Royal Highness the Prince of Wales on his visit to Canada. In 1863, when stationed at Japan, he took part in the action off Nagasaki. In 1869 he was promoted to Fleet Surgeon. He retired in 1876 with the rank of Deputy Inspector-General. The deceased gentleman was a prominent Freemason and served the office of Past Assistant Grand Director of Ceremonies and was P.Z. and P.A.G.Soj. in the Royal Arch degree.

Deputy Inspector-General Richard Domenichetti on July 12th, at his residence, Woodhall Spa, aged 78 years. An obituary notice will be found in another column.

On July 17th the King presented medals of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England for conspicuous services to the Ambulance Department. The recipients were: Sir John Furley, Chief Commissioner of the Central British Red Cross Committee, Hon. Bailiff; Mr. William Henry Morgan, Hon. Associate of the Order, chief superintendent of the Metropolitan Corps, St. John Ambulance Brigade; Mr. Richard Berdett-Sellers, Hon. Associate of the Order, M.R.C.S. Eng., chief surgeon, Rochdale Corps, St. John Ambulance Brigade; Mr. Marshall Hopper, Hon. Serving Brother of the Order, chief superintendent of the Hull Corps, St. John Ambulance Brigade; Mrs. Priscilla Laverack, Hon. Serving Sister of the Order, Hull Nursing Division, St. John Ambulance Brigade; Mr.

Robert Slater, private, Hull Corps, St. John Ambulance Brigade; Dr. Charles Henry Milburn, Esquire of the Order, Deputy Commissioner No. 6 District, St. John Ambulance Brigade; Dr. George Thomson, Hon. Associate of the Order, chief surgeon, Oldham Corps, St. John Ambulance Brigade; and Mr. Benjamin Sellars, first officer, Oldham Corps, St. John Ambulance Brigade.

Correspondence.

"Audi alteram partem."

"UNBOILED v. BOILED MILK."

To the Editors of THE LANCET.

SIRS,—In the letters which have been addressed to you on this subject I have been struck by the absence of any reference to experimental data. Yet there is a large amount of experimental evidence bearing directly upon the points at issue. May I ask for a little space to consider the subject from this point of view?

One must distinguish sharply at the outset between (1) the *digestibility* of the milk and (2) its *absorbability*. By the former I mean the ease with which it is peptonised in the stomach; by the latter the extent to which it enters the blood and is available for purposes of nutrition. Jessen,[1] experimenting on healthy men found that a pint of *raw* milk has completely disappeared from the stomach in three and a half hours; a pint of *boiled* milk in four hours. Verhaegen,[2] however, found that boiled milk required less time for digestion than that, while Reichmann[3] even goes so far as to state that 300 cubic centimetres of boiled milk remains for an hour less in the stomach than an equal quantity of milk taken raw.

It is obvious from this that the results of experiments on the relative digestibility of boiled and unboiled milk are not unanimous, but at all events boiled milk has not been proved to be much *less* digestible. Any one, moreover, who has taken the trouble to compare the relative density of clot formed by raw and by boiled milk under the influence of rennet must have recognised that any slight difference there may be is certainly in favour of boiled milk and not the reverse. And yet it is the density of the clot which determines the ease or otherwise with which milk is disposed of by the stomach.

As regards the comparative *absorption* of boiled and unboiled milk experiments have also yielded rather discordant results. Randnitz[4] found that dogs did not absorb the casein of boiled milk quite so well as that of raw milk, but the absorption of fat was the same in the two cases. Vassilieff[5] found that the nitrogen and fat of raw milk were better absorbed by healthy young men than the same ingredients after boiling, but this conclusion is disputed by Gaschibowsky.[6] It has also been found in the case both of infants and of calves that sterilised milk which has been kept at or about the boiling point for more than an hour is absorbed quite as well as milk which had merely been boiled in the usual way.[7]

The supposed loss of nutritive matter in the "skin" which forms on boiled milk is not of any real importance. 100 cubic centimetres of milk when boiled for 15 minutes lose only 0·273 gramme of proteid.[8] As a matter of fact the "skin" consists largely of phosphate of lime of which there is already too much in cow's milk.

It is my habit in out-patient practice at the Hospital for Sick Children to order that the milk shall be boiled in every case. Amongst several hundreds of infants so fed I have but rarely had any difficulty in obtaining the normal increase of weight. This is not a mere general impression, for I make a point of having these children weighed every week and a careful record is kept of the increase in weight and the exact method of feeding. I am convinced that such satisfactory results as I find to be the rule could not be obtained if the nutritive value of milk really were, as Dr. Clement Dukes asserts, greatly impaired by boiling.

As regards the supposed risk of producing scurvy by the use of boiled milk it will be sufficient to quote the following paragraph from Holt's well-known text-book on the Diseases of Childhood (p. 210).

> Since the introduction of the practice of heating milk used in infant feeding the question has been raised in many quarters whether this may not be a cause of scurvy. I have carefully investigated this question in the records of three institutions in which for five years "sterilised milk" was the standard food for all artificially-fed infants. The number of children under 18 months who have had this diet is nearly 1000. During this period but two cases of scurvy were observed, and in neither case had the child been upon a diet of sterilised milk. However, I have recently seen in private practice two cases of scurvy in which the cause seemed to be prolonged sterilisation at a high temperature—i.e., 212° F. for over an hour. In some of the cases in which the sterilised milk is supposed to have been the cause of scurvy it was undoubtedly the milk formula which was at fault and not the process of heating. In two patients under personal observation who developed scurvy while taking "sterilised" milk and a proprietary food the food was discontinued and the patient recovered although heating the milk was continued. In four cases observed by Winkes no other treatment was employed than the substitution of "sterilised" milk for the previous diet, which in three instances had been proprietary foods. All the patients promptly recovered. In these cases the milk was heated to 212° F.

In any case the risk of scurvy is one of quite secondary importance. All that one has to do in order to obviate it is to see that a little fresh fruit juice is given to the child occasionally.

Everyone will agree with Dr. Dukes that the ideal to be aimed at is a milk-supply of such assured purity that there can be no risk of disease being conveyed from the cow or the dairy to the consumer. But everyone will also agree that, whatever may be the case in such exceptional circumstances as those in which Dr. Dukes has the advantage to be placed, the milk-supply of the great bulk of the community is not yet in this ideal condition. As long as it can be truly said, as Dr. Dukes has himself admitted,[9] that "milk has been shown to be a fertile cause and communicator of disease in communities," and as long as it remains true, as he has also remarked,[10] "that between the cow's udder and the human stomach the milk may be so poisoned as to cause death to the recipient," so long, I am convinced, will the medical profession do wisely to urge that (again to quote Dr. Dukes): "No milk should be drunk until it has been boiled, even although its nourishing value is thereby diminished." That any real proof of this diminution of nourishing value has yet, however, been adduced I, for one, will not admit.—I am, Sirs, yours faithfully,

ROBERT HUTCHISON.

London Hospital College, July 12th, 1901.

To the Editors of THE LANCET.

SIRS,—I believe that this controversy would have been summarily dismissed as rank heresy were it not for the fact that the heretic is such a distinguished man as Dr. Clement Dukes. If it were possible for the milk to be transferred *direct* from the gland to the human stomach there would have been no necessity for either boiling or sterilising it. But in practice we find that by the time milk is actually consumed it has been exposed to numerous foci of infection (both wilful and accidental) and is in consequence charged with countless bacterial forms.

Milk is an exceptionally good medium for the growth of organisms, and they thrive therein without causing any perceptible change in its appearance. With the appearance of acidification some organisms (notably cholera vibrios) are, no doubt, destroyed; but so much time usually elapses that milk in most cases is used up before this occurs.

All these risks can be easily avoided by boiling or sterilising; and there is no evidence on record to show that these methods cause any sensible lowering in the nutritive value of milk.

Dr. Dukes maintains that all that is really wanted is more efficient inspection of cowsheds and dairies. I might as well ask him to apply this reasoning to the water-supplies, to endeavour to prevent their contamination, and to do away with all sand or biological filters. No matter how stringent be the precautions taken, it is as impossible to prevent the entrance of microbes into milk as it is in our water-supplies.

[1] Zeitschrift für Biologie, 1883, Band xix., p. 129.
[2] Physiologie et Pathologie de la Sécrétion Gastrique, Paris, 1898, p. 11.
[3] Zeitschrift für Klinische Medicin, 1885, Band ix., p. 565.
[4] Zeitschrift für Physiologische Chemie, 1890, Band xiv., p. 1.
[5] Quoted by Cautley, "The Feeding of Infants," 1897, p. 214.
[6] Maly's Jahresbericht, 1894, Band xxiv., p. 502.
[7] See Bendix, Jahrbuch für Kinderheilkunde 1894; Band xxxviii., p. 393; Cautley, op. cit., p. 215; and Weber, Bulletin de la Société Médicale Pratique, 1892, p. 77.
[8] Solomin, Archiv für Hygiene, 1897, Band xxviii., p. 43.
[9] School Diet, second edition, 1899, p. 89.
[10] Ibid., p. 90.

Dr. Fred. J. Smith observes, in THE LANCET of July 6th, p. 50, that he has seen children made "peevish and even seriously ill" by the effects of boiled milk. But is he quite sure that the cause of this is to be found in milk and not elsewhere? And what evidence is there to show that unboiled milk would have given more satisfactory results in the case of those children?

I am, Sirs, yours faithfully,

M. L. DHINGRA, M.D. EDIN.

Albemarle-street, W., July 8th, 1901.

"LEGISLATION AGAINST NATIONAL INTEMPERANCE."

To the Editors of THE LANCET.

SIRS,—I crave your courtesy so far that you will afford me space for a final reply to Dr. Archdall Reid. We have reached that stage in the controversy when the *tu quoque* argument is apt to be used, and I do not desire that this important discussion should flicker out, so far as I am concerned, with Dr. Reid's peculiar view both of logic and summation of facts. Dr. Reid has a little joke (not at my expense but at his own, of course) regarding the presence of a dragon at three minutes past midnight on Nov. 10th, 1900, curling his whiskers on the cross of St. Paul's. He says that if he asserted that the dragon occupied this ecclesiastical situation nobody could disprove the assertion. Now this very example delivers Dr. Reid and his peculiar ideas regarding the nature of proof into my hands. I shall not spare mine enemy. The case of the dragon would be settled for myself (and I imagine for all sensible men) by considerations connected, first, with proofs of the existence of such a creature; next with questions of its ability to scale St. Paul's (Dr. Reid's dragon would possess wings, no doubt); and, thirdly, with the state of Dr. Reid's mind—here I need not say that I imply nothing personal, of course—when he asserted that he saw the whisker-curling operation. If he merely alleged that a dragon did curl his whiskers, without saying that he saw the operation performed, his case would be less worthy of consideration. Now, judged scientifically, I say we have no evidence in this case that dragons exist; therefore, all the rest goes by the board into that sea of speculation in which Dr. Reid's natatory efforts are not likely to keep him afloat very long if he trusts to the dragon illustration as a species of lifebuoy. He asks me for evidence that "acquired" characters are never transmitted. I suggest in turn that such evidence does exist. This is a reasonable view enough, but Dr. Reid, with an eel-like gesture, slips out of his difficulty on the pretence that I ask him to "prove a negative." That strain of his has "a dying fall." I have heard that argument used many times when the task of proving his own case was beyond the powers of an opponent. Suppose I assert that it is impossible that a dragon should have "curled his whiskers on the cross of St. Paul's." Dr. Reid says that I cannot prove my view to be correct because I "cannot prove a negative." Am I to take it, then, as a corollary of this monstrous proposition, that Dr. Reid asserts that, say, a lunatic's ideas cannot be contradicted? The real case is, that Dr. Reid and myself are both face to face with certain facts of inheritance and each of us seeks to explain them. He chooses one explanation; I choose another. I do not deny that congenital characters are inherited, but I contend that acquired characters may also be transmitted. It is no question of "proving a negative" at all; it is a question whether Dr. Reid's exclusive view as regards "acquired" characters is to prevail. If he has no stronger argument to offer than his dragon illustration as against my contention he must be indeed in "a parlous state." One word more. Dr. Reid professes to scout Spencer, Eimer, Hertwig, Cunningham, and other advocates of the view that "acquired" characters may be handed on. Nobody asks him to "review the works of Spencer" in THE LANCET, but this rejoinder of his, I hope, none of your readers will regard as disposing of the fact that some of our most distinguished biologists are opposed to the Weismannian and Galtonian doctrines tooth and nail. Already I have referred Dr. Reid to cases reported in your own pages. He will find others in Eimer's and Hertwig's works. He says nothing, for example, of the experiments I alluded to on the division of ova, each division reproducing a perfect animal, and yet he avers there is no evidence on my side for him to criticise. In a word, Dr. Reid shuts his eyes conveniently to the evidence on the other side, and then, with his optic on the dragon seated on the cross of St. Paul's, asks me to desist from requesting him "to prove a negative." "I ask him for evidence," says Dr. Reid, and in turn I have suggested where he will find it. If he does not care to criticise it—he has criticised a good deal of evidence on his own side in your pages—that is his own affair. Meanwhile let me say that I believe that the whole question of heredity is still *sub judice*. It is sheer folly for Dr. Reid, as it would be folly on my part, to pretend that either of us has reached an adequate explanation of the varied phases of inheritance. But I protest forcibly at the same time against the idea that the advocates of Weismannian or Galtonian doctrines have proved their case as against the heredity of acquired characters. That case, as pushed to extremes, may, at present, be adequately represented by Dr. Reid's ecclesiastically minded dragon.

I am, Sirs, yours faithfully.

Edinburgh, July 6th, 1901. ANDREW WILSON.

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—I beg to thank you warmly for your admirable leading article in THE LANCET of July 13th, p. 90, on the position, aims, and difficulties of Epsom College—nothing could be better. But there is one error in your report of my observations at the dinner that needs correction. The amount collected and expended upon the pensioners and foundation scholars within the past 14 or 15 years has been between £70,000 and £80,000, not between £17,000 and £18,000.

I omitted to state that by the will of the late Mr. J. F. France, ophthalmic surgeon to Guy's Hospital, he has left about £10,000 to found additional pensions for *medical men*, to be awarded at the discretion of the council upon which he had served nearly 50 years. He had also arranged to complete the purchase of a tenth scholarship for girls at the schools of the Royal Asylum of St. Anne's. These also are entrusted to the council to award. Altogether my old teacher has expended £22,000 on the purchase of these scholarships for young girls at St. Anne's and in providing for these additional pensions for aged medical men.

I am, Sirs, yours faithfully,

C. HOLMAN,

27, Soho-square, W., July, 1901. Treasurer of Epsom College.

"THE ARMY MEDICAL SERVICE."

To the Editors of THE LANCET.

SIRS,—Following your recent leading article on the above subject in which you express regret for the absence on the committee of reorganisation "of an army medical officer of high administrative rank and experience" and "trust that the committee will be empowered to call any witnesses whom they may desire to examine," and the reply of the Secretary of State for War in the House of Commons on July 4th that "the committee was a consultative one," only, that "the proceedings would be private" and that they "would not take evidence," one turned to your issue of July 13th in the hope of finding some reference to the position taken up by the War Office as narrated in the replies to the questions asked by Dr. Farquharson and Sir Charles Dilke, and in the absence of such will you allow me to make a few remarks?

I take it for granted that the department will concur in the views which you express in the article in question; and, indeed, without a member on the committee of high army medical rank "with a knowledge of military organisation and the requirements of field medical service," it is difficult to understand how the outcome of this scheme placed before the committee, emanating apparently from the War Office itself irrespective of the Army Medical Office, can adequately meet the army wants and solve the difficulties under which the Royal Army Medical Corps labours. It is true that this committee comprises the names of professional men of high civil standing, a lieutenant-colonel of the Royal Army Medical Corps who also represents Ireland and the professional head of the India Office, yet, with the one limited exception, it members cannot possess that practical knowledge of the medical needs and the details of army routine organisation and command bearing on the efficient performance of the duties placed upon the corps, which is

the outcome of "having gone through the mill" and of experience of "where the shoe pinches"; nor can they fully gauge "the general medical requirements of the army they are invited to consider" when deprived of the only means capable of eliciting the needs—the evidence of those who have "borne the burden and heat of the day." We have heard much lately of War Office reformation based on business principles, yet in respect of the medical section the primary essential to success—probing of the defects and laying bare the wants and opposing conditions to efficient work by interrogation of those having practical knowledge and experience of details—is ignored. And this committee, on whom so much public interest is centred and on whose conclusions so much of future army results depend for good or ill will work in private and "the terms of reference" placed before them it is "not proposed to publish"!

Well, Sirs, this committee is formed for the purpose of redressing the past and preventing the recurrence of the complaints which have given it birth, yet it must be apparent to anyone who glances over the past 30 or 40 years that the military authorities might have retained the goodwill of the profession which it had in 1860–61 and obtained an efficient body of professional men by making the conditions palatable to men of good standing and such as would permit of efficient performance of the duties placed upon them, and so have obviated the present necessity for action; but what do the facts of the past 30 or 40 years reveal but a condition of affairs, excluding from the purview the formation of the Royal Army Medical Corps, calculated to alienate the men whom the country required and to oppose efficient organisation and work. Any time during that period a well-contented department would have advertised itself, and it would only have required the War Office to make its numerical wants known to have met with the response from the profession which it obtained in the early "sixties"; but so far from this condition pertaining we know that the contrary was the fact and the results we see in the necessity for the present committee. I venture to say that few if any thinking members of the department during the period mentioned had the faintest belief in the existence of a wish on the part of the military authorities for a strong and efficient medical service—indeed, their acts negative such a conclusion; and when the past and the present are taken together the hope of a thoroughly well-organised and well-contented corps capable of performing satisfactorily the important army duties placed upon it grows small indeed. In the past it is quite certain that the responsibility for the defects of the department, including the shortcomings in the present war, rests with the War Office sections which have determined the conditions under which the work had to be done, and it is to be desired that in the future it will be borne in mind in assessing responsibility how insignificant a part the Army Medical Service played in the present in formulating the conditions necessary for its vitality and efficiency. Indeed, the studied indifference to its wishes and voice constitutes the worst feature in respect to its future well-being.

I am, Sirs, yours faithfully,
FRANCIS H. WELCH, F.R.C.S. Eng.,
Lee, S.E., July 15th, 1901. Surgeon-Colonel, A.M.S. (retired).

THE GENERAL MEDICAL COUNCIL ELECTION.

To the Editors of THE LANCET.

SIRS,—The Council of the British Medical Association having kindly permitted a meeting to be held at Cheltenham during the annual week it has been arranged to hold a meeting at St. Mary's Hall on Friday morning, August 2nd, at 9.15 A.M. All the Direct Representatives of the profession will be invited to attend and to speak on medical politics, and the same courtesy will be extended to all gentlemen who intend to become candidates. The meeting will be open to all members of the profession, whether members of the Association or not. As it is probable that many gentlemen will desire to speak a time-limit will be fixed.

I shall be glad to receive communications from any member of the profession who is desirous of taking part in the meeting. I am, Sirs, yours faithfully,
T. GARRETT HORDER.
32, Windsor-place, Cardiff, July 16th, 1901.

VELDT SORES.

To the Editors of THE LANCET.

SIRS,—I am reported in THE LANCET of July 13th, p. 82, in the account of the meeting of the Pathological Society of London held on July 3rd, as saying that the coccus of the veldt sore "would grow in a moist heat of 86° C., in a dry heat of 110° C., and it had retained all its virulence in a dry film for 61 days." This should read the coccus would survive and grow after being subjected for five minutes to moist heat of 86° C., dry heat 110° C., or prolonged drying for 61 days.

I am, Sirs, yours faithfully,
Middlesex Hospital, July 16th, 1901. N. BISHOP HARMAN.

"BRITISH MEDICAL MEN AND GERMAN WATERING-PLACES."

To the Editors of THE LANCET.

SIRS,—I read with a mixed feeling of interest your correspondent's article about British Medical Men and German Watering-places. I wonder how many of the gentlemen who carefully inspected these watering-places have inspected in the same manner the watering-places at home.

I also have paid visits to most of the German watering-places before I wrote my work on "Sea Sickness and Health Resorts," but I am glad I did not neglect to visit the English watering-places first. I maintain that the majority of cases sent to German watering-places would do much better if sent to watering-places at home, besides saving themselves great fatigue, expense, and many of the social disadvantages associated with these German watering-places.

The majority of the cases which are sent or go to Germany for Schott's treatment return without any benefit and would improve much better under ordinary treatment at home on account of the cases being unsuitable for Schott's treatment.

A German doctor in conversation once said to me that the English doctors were always grumbling about the profession being so poor, yet, he said, "you send all your rich patients abroad and keep all the poor ones at home." There is a good deal of common sense in this remark. I think a medical man should always consider whether there is not an English watering-place where he can send his patient in preference to sending the patient abroad; further, if he is not acquainted with the properties of any springs, let him write to one of the local men and he will be sure to receive a courteous reply giving him every information.

I should very much like to see the faces of a number of German doctors if it was proposed to them to come and visit our watering-places with a view of learning their advantages and sending their patients. I am sure it would be a study.

There are, I know, certain diseases that are more benefited by certain German waters, and I further know that there are a certain class of people who will go to German watering-places, but I protest against sending our patients over wholesale and forgetting we have watering-places at home.

I am, Sirs, yours truly,
Manchester-square, W., July 15th, 1901. THOMAS DUTTON.

"THE CONTAMINATION OF POST-OFFICES."

To the Editors of THE LANCET.

SIRS,—With reference to the letters which have recently appeared on this subject in THE LANCET it cannot be too clearly understood that it is maintained by those who are opposed to the present action of the Postal Telegraph Clerks' Association that if the course suggested by that association were adopted it could supply no guarantee that any needful sanitary alterations in post-office buildings would be carried out.

Before, however, the assertions made by your correspondents can be accepted as evidence of their aptitude to mould public opinion on these matters it would be well that the public should be enlightened in the very numerous inaccuracies with which their letters abound. In Mr. Belderson's letter a very strong point is endeavoured to be made from Mr. Balfour's statement on June 7th in the House of Commons that every one of the Tweedmouth recommendations had been carried out. A careful perusal of his letter

discloses most extraordinary confusion on the part of its writer who in his numerous references to the proceedings before Lord Tweedmouth's Committee has apparently entirely failed in distinguishing between the report of that committee and the evidence which was submitted to it. Lord Tweedmouth's Committee did not in its report state that "much still requires to be accomplished before the post-office buildings of the country will be placed in a universally satisfactory condition as regards their sanitation," nor did it "lay down several canons for the guidance of the officials." On the contrary, the following was its report and so important is this matter that I trust you will pardon me for quoting it *in extenso*:—

Sanitary arrangements.—A good deal of evidence was given as to the alleged insanitary condition of certain post-offices. No doubt in some few cases owing to the rapid development of post-office work and the consequent increase of the staff the offices may not be in all respects satisfactory, but the Post Office appears to us to take all possible steps to remedy such cases, and it is kept acquainted with the actual condition of the large post-offices throughout the United Kingdom by annual reports from its local medical officers. A large number of these officers have furnished us with reports on the offices which they inspect, and these reports appear to us to be on the whole very satisfactory.

Again, as further evidence of the want of accuracy on the part of those who are pioneering this movement for the Postal Telegraph Clerks' Association, reference is made by Mr. Belderson to the knowledge of Dr. Ransom of the unsatisfactory condition of the new Nottingham post office. I am in a position to state that it is known that inquiry was made of Dr. Ransom in connexion with certain statements which he had seen fit to make and that it was found he had absolutely no personal knowledge of the condition of that building beyond the very limited one of the public office, upon which evidence it transpired he had based his assertions.

Again, with regard to Mr. Garland's allegations in THE LANCET of June 29th, p. 1860, as to the excessive prevalence of tubercle amongst telegraphists and his attributing it to the insanitary conditions of post-office buildings, it is worthy of note that the medical officers have for years interested themselves in this subject and only recently have collected statistics concerning it. These statistics just issued reveal that this disease exists only to a very limited degree amongst all grades of postal employés, and that its greatest incidence is found to be not on the telegraphists but on the letter-carriers. A feature exhibited by these statistics which in the present agitation should not be lost sight of is that in a considerable number of cases the faulty dwellings and habits of the men have been held to have been provocative of the disease, and in conclusion this impels me to raise the question, Do these men who are now making such urgent demands of the Government and on the public purse strive to maintain as high a standard in the hygienic conditions of their homes and home life as that they now insist upon as essential when engaged in their work for the public? I fear not.

I am, Sirs, yours faithfully,

July 13th, 1901. P.M.O.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—The Famine.—An Invasion of Locusts.

THE mortality from plague for the whole of India has further declined from 847 in the previous week to 683 for the past seven days. The Bombay districts seem to remain stationary. In Bengal the disease has rapidly subsided and in the affected districts only a very few cases are now reported. In Calcutta the deaths are only about 20 per week. In Bombay city also there is a distinct improvement. I have previously remarked on the similarity of course pursued by the several outbreaks in these two cities, but Calcutta has never been so severely attacked as Bombay. With each year, however, there has been an increase in Calcutta. In the 1889 outbreak there were 1336 seizures and 1223 deaths in addition to 835 suspicious cases. In the 1900 outbreak there were 7897 seizures and 7373 deaths. This year's outbreak has brought 8135 seizures with 7410 deaths. The deaths from plague have almost entirely accounted for the excess in the general mortality, showing that the system adopted for discovering and reporting plague deaths must be fairly accurate. This result has not been arrived at by calling every case plague which cannot be put down to any definite disease, as has been done in many places visited by the epidemic, but by detailed examination of the reports of the medical officers into the history of every death.

The famine returns for last week show an increase of 14,000, of which 12,700 were in the British districts of Bombay. The total under relief at the present time amounts to 520,000 persons.

A large part of India has recently been subjected to an invasion of locusts. Swarms have been seen from Beluchistan on the west to Assam on the east. In some districts they have merely passed over without doing any damage; in others slight injuries to the crops have resulted; and in a few places considerable destruction has been experienced. The danger is not so much from the mature insect as from the young. The places where the swarms settle and lay their eggs are always the chief sufferers. The plan generally adopted is to plough the land and thus to bury the eggs, but where these have hatched and the young, wingless hoppers have commenced by their voracious feeding to clear every eatable plant, it is necessary to dig trenches, to drive the immature insects into them, and then to bury them, or to strew the affected land with straw soaked in petroleum and to set fire to it. It is anticipated that unless this is done on an extensive scale for the present visitation enormous destruction of crops will result. Some of the papers are already calling for Government help in the matter. In some districts numbers of dead locusts have been discovered, and they appear to have died from a worm (?) disease, as the thoraces of the infected insects are infested with maggots. These specimens have been sent to Calcutta for examination. Perhaps, after all, nature will provide a remedy.

June 29th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Electric Wire Fatality.

THE electric tramways in Manchester have claimed their first victim. The deceased, a man in the employ of the corporation, was assisting in the changing of an "anchor wire." He went up a ladder, which was not part of his duty, and touched a "live wire." His fellow workman heard a cry and looking round saw deceased "with fire coming out of his hands in the act of falling from the top of the post," which he had reached by climbing the ladder. He fell about 22 feet, alighting on his head. He was taken to the infirmary where he died soon afterwards. The point that was brought out at the inquest which was held on July 12th was that ignorance often, and carelessness far too often, bring about these accidents. It is the old story, familiarity with danger inducing disregard of it. As regards warnings, there was some uncertainty as to the man having had any warning of danger. The electrical engineer for the overhead electrical equipment said that the man had not been personally warned by him. He left it to the foreman. In this case the foreman left it to another man, who in his turn almost certainly failed to warn the deceased. The engineer said that he should "accept the coroner's recommendation to warn all the workmen specifically." The invisibility of the danger makes caution the more needful, so it is to be hoped that the coroner's recommendation will be carried out. Overhead-wire dangers were well illustrated in another way at Bolton on July 22nd. "The trolley-head of a car got fast in the span-wire and the force swung round the bracket-arm of a street-pole, with the result that over 100 yards of overhead equipment fell with a terrific crash and illuminated the street. There were some miraculous escapes from the live wires." The system which allows of such incidents as these is not perfect.

Meeting of the Dwellings Improvement Society.

On July 11th a meeting was held of the newly formed "Citizens' Committee for the Improvement of Unwholesome Dwellings and Surroundings of the Poor," Mr. T. C. Horsfall presiding. In spite of its cumbrous title the society may do good, for its objects are unexceptionable. But the multiplication of societies may go too far, and the strength of the forces opposed to the disease-producing conditions of our towns may be weakened by their being broken up into guerilla bands. The objects of this society are all embraced by the Manchester and Salford Sanitary Association, of

which Mr. Horsfall is a member, and it is to be regretted that the new society has not joined the old one, so that the strength of the two might be combined and overlapping be avoided. One of the most important resolutions passed by the meeting urged on the Lord Mayor and the other members of the town council the desirableness of acquiring Heaton Park—which is not yet quite lost to the city—because those present believed that a large amount of land outside the city boundaries, "both for the provision of open spaces and of houses, is absolutely necessary for the welfare of the community." A town's meeting has recently been held under the chairmanship of the Lord Mayor and a resolution in favour of the purchase of the Park was passed, but the city council numbers among its members some who do not realise the value of large open spaces to the health of crowded towns, or the fact that Heaton Park is the only one now left near Manchester, so that the regrettable blunder by which Trafford Park was lost may be repeated on the north side of the city. Mr. F. Scott, the secretary of the Sanitary Association, in seconding the resolution said that at the town's meeting there was a marked line dividing the two sections for and against the purchase of the park. The latter consisted almost, if not quite, exclusively of the property owners and rent-chargers, while the former "included a very large number of working people whose views were voiced from the platform by the chairman of the Trades Council, and who were enthusiastically in favour of the purchase." It has been carefully calculated by architects and others that, without spoiling the park, its "fringe" could be used for building sites, and would bring in an income of £10,000 a year. Another speaker thought that the purchase was all the more essential "when they considered the extension of the slum system which was going on round Manchester in the erection of mere breeding cages crowded together in narrow streets." "Breeding cages" may be thought to be a strong expression, but it cannot be said to overstate the case. By another resolution the committee seeks "the coöperation of the Sanitary Association, the Ladies' Public Health Society, the Manchester and Salford Housing Reform Council, and other similar organisations." It remains to be seen whether the council will be moved or not. One need seemed to press on the minds of those present—namely, that the members of the council should not be chosen for their political views, as is almost invariably the case at present, but for their intelligent interest in the physical and moral welfare of their fellow citizens. A clerical speaker said that they had solved this problem in Gorton, where they had elected five members on social grounds by taking them equally from the two political parties, a proceeding which suggests a sort of double Hibernicism. The chairman announced that Professor Chapman, who has recently been appointed to the chair of Political Economy at Owens College, had joined the committee. At the meeting of the Parks Committee on July 11th it was decided that in view of the expression of public opinion that has taken place the whole question of the purchase of the park should be considered at a special meeting.

Medical Golf.

The love of outdoor games still exists in and about Manchester among members of the medical profession, many of whom feel quite at home before the wickets or on the golf links. And when one considers the conditions of life for the residents here—for medical men have necessarily to live near their patients—it is satisfactory to know that a fair proportion gain health and refreshment from cricket and golf. Since May 1st a medical golf tournament has been in progress and has just been decided. There were 78 entries and the opening rounds were played on the Trafford Park links of the Manchester Golf Club where the final was also played. Dr. J. Massey of Pendleton was the victor and won the challenge cup for the year, together with a replica to be held as a memento, his opponent in the last stage of the tournament being Dr. J. Howie Smith of Stockport, to whom he is doubtless extremely grateful, for without losers no one could win. Both gentlemen, therefore, are to be congratulated.

Another Tramway Danger.

The great natural beauty of the Manchester suburbs has been destroyed long since by the growth of the town, and it is only of late that our senators have become aware that love of the picturesque and beautiful may coexist with reason and good sense. The consequence is that there is only one approach to the town of which its inhabitants can be proud. Of the Wilmslow-road the *Manchester Guardian* says: "Few great manufacturing cities in England can boast of so fine a leafy avenue within easy distance of the centre of the town ..... with its ancient elms and limes." Much the same is true of the Palatine-road, but both are said to be threatened by the corporation and the Withington District Council, who, it is stated, intend to cut off part of the gardens to widen the tram-lines. The dwellers on the road are naturally alarmed, but as the *Guardian* says, it is hard to believe that they will not take every precaution to save the trees, and "we may, therefore, fairly expect the corporation to see that the installation of the overhead system does not destroy the peculiar charm of the pleasantest approach to Manchester." And so say we all.

July 16th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Proposed Sanatorium for Consumption near Bath for the Counties of Gloucester, Somerset, and Wilts.

WITHIN the past few days meetings have been held both at Gloucester and Cheltenham, under the auspices of the Gloucestershire, Somersetshire, and Wiltshire branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, in furtherance of a scheme for the erection of a free open-air sanatorium for the poorer classes of those three counties The mayors of the respective towns presided. At the Gloucester meeting the chief speakers were Dr. R. Maguire (physician to the Brompton Hospital for Consumption) and Dr. L. A. Weatherly of Bath (chairman of the executive committee of the proposed sanatorium). In speaking of the prophylaxis of tuberculosis and describing the methods by which the disease could be prevented from spreading from one patient to another Dr. Maguire said that it was a great misfortune that some people should think it was a danger to have a hospital for the reception of tuberculous patients near them. During the last month the question had been raised in regard to the Brompton Hospital, which was the first of the kind established, and some people said that it was a danger to the community. The hospital was built in the fields originally, but a very rich neighbourhood of London had sprung up all around it. The number of cases of tuberculosis of the lungs which had arisen in the Brompton Hospital during the whole of the years in which it had been in existence had been very few, and that was because of the care which was taken. If care was taken there was really no great risk of contagion and it was only right that the public should be educated as to the kind of care that was wanted. Dr. Weatherly gave an account of what the committee of the three counties had done, and were hoping to do, with reference to the establishment of the sanatorium. A site near Bath had already been purchased for £2000 and the foundations of the building had been prepared. The total cost of the sanatorium would not be less than £20,000, and it would accommodate 60 patients in the winter and 100 in the summer. At Cheltenham the chief speakers were Professor J. Michell Clarke, of University College, Bristol, and Dr. Weatherly. At both meetings the following resolution was passed unanimously:—

That this meeting, recognising the urgent need of the building of a sanatorium for the poorer classes of consumptives in the counties of Gloucestershire, Somerset, and Wilts, cordially supports the scheme, and resolves to do all in its power to help it forward by assisting to raise the necessary funds.

Munificent Bequests by a Clergyman.

The Rev. John Balfour Atkinson, rector of Larling, near Thetford, who held curacies in Somerset from 1873 to 1887, has bequeathed £3000 to Guy's Hospital, and to the Royal Infirmary, Edinburgh, £10,000 and the residue of his property. The net value of his personal estate is nearly £60,000.

Cardiff Infirmary.

The board of management of the Cardiff Infirmary have decided to appoint an additional honorary anæsthetist to attend at the infirmary three times a week. There are at present two honorary anæsthetists on the staff of the institution. A suggestion to appoint an assistant gynæcologist was not adopted by the board.

Swansea Hospital.

An anonymous donor has given £1250 towards the refurnishing of one of the empty wards of the Swansea Hospital. At the June meeting of the hospital committee Miss Dillwyn stated that she had had placed at her disposal by an anonymous benefactor the sum of £500 as the nucleus of a fund for the establishment and maintenance of a convalescent home in connexion with the hospital, but at the meeting of the committee held on July 12th she announced that this amount had been increased to £5000 and that she herself would contribute £100 to the fund provided nine other persons would each give an equal amount. The Swansea Trade and Labour Council are desirous of obtaining more direct representation on the board of management of the hospital for the workmen in the town who are said to contribute one-fourth of the income of the institution. A contributor of 25 guineas has hitherto been a life governor and this qualification has now been reduced to 10 guineas, but a proposal that any body of working men who contribute this sum annually shall be entitled to nominate a governor has not been entertained. A rule embodying this proposal has been added only during the present year to the rules of the Cardiff Infirmary. Although it may never be used to the injury of the institution it is full of dangerous possibilities, for practically any body of persons or members of a congregation, or club, or association by subscribing a guinea yearly are entitled to nominate one governor for the year during which the subscription is current. A certain number of groups of 21 persons, each subscribing 1*s.* yearly, might thus obtain absolute control of the institution.

Slaughter-houses at Bristol and Cardiff.

The Health Committee of the Bristol Corporation have under consideration the further provision of slaughter-houses for the city. In his last published annual report (1899) Dr. D. S. Davies stated that there were in Bristol 124 private slaughter-houses and two belonging to the Docks Committee, and he further stated that the position and structure of a large number of the former rendered them unsuitable for the purpose to which they were put. At Cardiff all slaughter-houses were abolished many years ago through the provisions of a local Act and two admirably arranged and well-constructed public abattoirs are the only places in the town where slaughtering is permitted. In the year 1900 there were slaughtered in these two abattoirs nearly 95,000 animals and during the same year about 16,000 pounds of unsound meat were destroyed. It is of interest to compare these figures with those for the year 1896, when 90,000 animals were slaughtered and about 4000 pounds of unsound meat were destroyed. The large increase in the quantity of meat destroyed is no doubt due to increased vigilance in inspection. This is now carried out by the superintendent of the slaughter-houses and his assistants, by an inspector who has had special experience as a butcher and as a meat-salesman, and by a veterinary surgeon whose whole time is given to the service of the corporation. This increased activity on the part of the health department has had the effect of increasing the number of slaughter-houses just outside the borough boundaries, and in his report for the year 1900 Dr. E. Walford discusses the desirability of a more stringent examination of carcasses brought into the borough from outside districts. He admits that at present no power exists for the establishment of such examination, but he suggests that it might be obtained by inserting a clause in a local Bill requiring that all meat slaughtered outside the town and brought into the borough for sale should be taken for examination to a meat station and if passed as sound should be stamped.

Diphtheria in Glamorganshire.

The continued prevalence of diphtheria in Glamorganshire is sufficiently serious to call for some comment. During the past four years the disease has been endemic and has been responsible for a very large number of deaths. In the past six months, in the seven largest towns of the county—namely, Cardiff, Swansea, Rhondda, Merthyr, Aberdare, Pontypridd and Mountain Ash—where there is an aggregate population of over half a million persons, there have been notified 1350 cases of diphtheria, equal to a case-rate of nearly 5 per 1000 per annum. The number in each town varied considerably, the case-rate in Swansea being 1 per 1000, in Merthyr 2, in Cardiff 3, in Aberdare 4, in Mountain Ash 8, in Rhondda 9, and in Pontypridd 11 per 1000. (The decimal points have been omitted in these calculations.) The medical officer of health of Merthyr has been hampered in his endeavours to stamp out the disease by the insistence of prominent members of the Health Committee that the epidemic is entirely due to the impure water which is said to be supplied to Dowlais, where a large proportion of the cases have occurred. The danger of allowing the inhabitants to take this erroneous view lies in the fact that though they may refrain from drinking the water they will still continue to visit and to hold religious meetings in infected houses and in many other ways they will spread the disease by personal contact.

Cardiff Cottage Homes.

It has been admitted by the Cardiff Board of Guardians for some time past that increased accommodation would have to be provided for the indoor paupers of the union. A suggestion to erect a new workhouse, which it was estimated would cost about £40,000, met with little support, and it has been alternatively decided to build grouped cottage homes for 72 children. Plans for this institution were adopted by the board on July 5th. The architect, Mr. E. Seward of Cardiff, has provided for an administration block, a detached cottage to accommodate 24 children, with a bedroom for the father and mother and a bedroom for a relief mother, and two detached and two semi-detached cottages with accommodation in each for 12 children and a mother. The total cost of the scheme exclusive of the site is estimated at £6000.

Bristol Municipal Lodging House.

The corporation of Bristol have decided to follow the example of Salford, Southampton, Manchester, and other towns and to erect a municipal lodging-house. There will be accommodation for 120 men and the cost, exclusive of furnishing, is estimated at £7100 or about £60 per bed, a sum which compares favourably with that which was expended at Salford, or at Southampton, or by Lord Rowton in his first venture at Vauxhall. At the Salford lodging-house there is accommodation for 285 men and at Southampton 186 can be accommodated.

July 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The School of Medicine of the Royal Colleges, Edinburgh.

AT a meeting of the governing board of the School of Medicine of the Royal Colleges, Edinburgh, the secretary, Mr. R. N. Ramsay, reported that the number of students attending the school during the winter session 1900–1901 was 1160, and during the summer session 1901 the number was 1119.

Appointment of an Aberdeen Lady Medical Graduate.

Miss Myra Mackenzie, M.B., the first lady medical graduate in the history of Aberdeen University, has been appointed house surgeon to the Sick Children's Hospital, Sheffield.

Small-pox at Peterhead.

Last week it was reported to Peterhead Town Council by the medical officer of health and the sanitary inspector that owing to the vigorous measures adopted in view of the proximity of the herring fishing there was no danger of small-pox spreading, the case that had been treated in hospital being convalescent, while the family would remain a week or two longer in hospital. It was stated that a very suitable house for the reception of "contacts" had been obtained and would be occupied so long as was necessary.

Glasgow University.

At a meeting of the University Court of Glasgow University on July 11th, it was announced that under the will of the late Mrs. M'Roberts of Todhill a sum of £10,000 had been bequeathed to the university for the purpose of founding and endowing a chair as the court may direct. On the recommendation of a special committee the court decided to give effect to the resolution of the general council of the university, and to take the steps requisite to institute the degrees of B.Sc. and D.Sc. in the department of public health, and authority was given for the preparation of a draft ordinance prescribing the regulations for the courses of study and for the examinations in connexion with these degrees. A proposal to fit up glass cases on the walls of the Randolph Hall for the reception and display of the illuminated addresses presented on the occasion of the ninth jubilee was adopted. There was

no other business of general interest. The final examinations for degrees in medicine which have been in progress during the last three weeks have come to an end and the list of successful candidates has been issued. The graduation ceremony is expected to take place near the end of the month.

Small-pox Hospital Accommodation in Glasgow.

The recent epidemic, now happily a matter of history, has taught the authorities, among other lessons, the necessity for increasing their arrangements for the reception of small-pox patients. It was found that to send these patients to the hospital at Belvedere, where infectious diseases in general are received, had many disadvantages and a special committee was appointed to deal with the question. At a recent meeting of the town council the committee reported in favour of the erection of a new hospital and were authorised to select a site and to obtain plans. Dr. Carswell announced that several sites had been inspected and that the contemplated arrangements would be fully adequate to meet the highly improbable event of a renewed outbreak of the disease.

St. Andrews University.

The trustees of the late Miss Malcolm, sister of Sir James Malcolm, Bart., of Balbedie, have intimated that a legacy of £4000 has been left to the university for the purpose of establishing medical bursaries or scholarships.

New Hospital for Consumption at Perth.

The new hospital for the treatment of consumptive patients, erected at a cost of £10,000 by Sir Robert and Lady Pullar of Tayside on the western slopes of Kinnoull Hill, Perth, was formally handed over to the Society for the Relief of Incurable and Chronic Cases on July 15th. The ceremony took place in the presence of a large and distinguished company, and an inaugural address was delivered by Sir William Gairdner, K.C.B. The hospital is well sheltered from the north and east and stands in its own grounds, which extend to about six acres. Accommodation is provided for 20 patients. A determined endeavour is being made to secure an endowment for at least eight of the beds, so that the authorities may be able to receive a certain proportion of patients from the very poorest classes. This will need a sum of £10,000 and towards this nearly £5000 have already been received.

July 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Board of Superintendence of the Dublin Hospitals.

THE annual report of the Board of Superintendence of the Dublin hospitals has recently appeared. It states that during the year ending March 31st, 1901, no culpable irregularity on the part of nurses or attendants was brought before the notice of the board. They note with regret that the interest taken, as indicated by the attendances of the governing bodies at their various meetings, leaves much to be desired. The board are of opinion that the holding of "wakes" in tenement houses, condemned by all religious and medical authorities, might be to a great extent prevented if suitable mortuaries were established in the different parishes. The report states that the board are gratified to observe that the medical staff of each hospital (with the exception of one) is now represented on the governing board by some of its members. As regards statistics, the number of patients admitted during the year to the hospitals under the supervision of the board was 11,601, the total daily average number of beds occupied in the hospitals covered by this report being 946·05. The time spent in hospital by each patient under treatment (omitting the patients in the Royal Hospital for Incurables) averaged 24·16 days.

Tuberculosis in Ireland.

In a notice of the forthcoming Congress on Tuberculosis the *Irish Times* calls attention to some recent returns of the Registrar-General for Ireland dealing with the subject. They show that in 1899 79,699 deaths from all causes were registered in Ireland and of these no less than 12,812 were caused by tuberculosis. It appears thus that the deaths from tuberculosis are far more numerous than those caused by zymotic diseases, although the latter include scarlet fever, small-pox, measles, diphtheria, epidemic diarrhœa, typhus fever, typhoid fever, cholera, dysentery, whooping-cough, influenza, puerperal fever, simple continued fever, and ill-defined fever. The mortality caused by all these taken together was for the year 1899 8857, or only two-thirds of the number attributable to tuberculosis alone. In Dublin 1200 people die each year, while in Belfast there is an annual mortality of over 1000. Modern pathological research tends every year to add to the number of diseases traceable to tuberculous infection—e.g., the chronic abscess and the enlarged bursa. It seems probable that for this reason alone the returns of deaths from tuberculosis will largely increase.

The Conference of the British Pharmaceutical Societies.

The British Pharmaceutical Conference will be held in Dublin on July 29th when the proceedings will be opened by a reception by the President at the Museum of Science and Art. The President for this year is Mr. G. L. Druce, M.A., F.L.S., Mayor of Oxford. The visitors, of whom between 400 and 500 are expected, will be welcomed by the Lord Mayor of Dublin and will hold their scientific meetings in the lecture theatre of the Royal Dublin Society.

County Antrim Infirmary.

At a meeting of the Board of Management of the County Antrim Infirmary, held in the board-room of the hospital, Lisburn, on July 11th, a committee was formed to draw up a representation for the County Down County Council asking them—in reference to the admission of patients—to contribute towards the expenses of that county's patients. It was suggested that in order to increase the finances a fancy fair and bazaar should be held.

The Outbreak of Typhoid Fever in Belfast.

At the meeting of the Public Health Committee of Belfast on July 11th a report in reference to the outbreak of typhoid fever was presented by Dr. A. G. Robb, visiting physician to the fever hospital; by Dr. J. Fulton, medical officer of health of No. 10 Dispensary District; and by Dr. H. Whitaker, medical superintendent officer of health of Belfast. These medical men made a careful inquiry into the history and probable cause of the onset of typhoid fever in a list of 24 houses supplied to them, the number of cases of typhoid fever being 27. In their endeavour to arrive at the cause of onset they quoted the evidence under the following headings: 1. Date of first appearance of the disease. This varied widely from the end of March until the beginning of June. In the latter half of May in a considerable number the disease first appeared. 2. Sanitary state of houses. The large proportion of these houses are of modern construction, built on good ground. With three exceptions they are provided with back passages; with one exception they have water-closets. In no case was there a cistern, all drinking-water being drawn direct from the main. With three exceptions the yards were in good condition, well drained and trapped. In a few cases, however, they proved evidence of the greatest carelessness and disregard of sanitary habits on the part of the inmates. In some, where there were good water-closets in good working order, these closets were apparently little used, deposits of fæces being found all over the yards. 3. Careful inquiry into the possibility of infection from food supplies failed to elicit any satisfactory evidence of infection in that way. 4. Milk-supply. In two houses condensed milk was used, in four there was no regular supply of milk, while the remaining 18 houses drew their milk from 13 different sources. Inquiry at these 13 places of supply failed to elicit any evidence of the possibility of infection by that means. 5. Water-supply. These houses are supplied with the Stoneyford water. The medical men appointed visited the gathering ground in the Stoneyford catchment area, and they report that they found abundant evidence of the direct contamination of the Stoneyford reservoir with alvine discharges, both brute and human, and that but little change had occurred therein during the last three years when two of the sanitary sub-officers reported that "the drainage of a number of farmhouses, stables, manure-heaps, &c., discharges either into the subsoil or into the adjoining streams or water-courses." They found that two cases of typhoid fever had occurred in this area in different houses on Feb. 5th and 28th last; one of the patients died and the other had been removed to hospital after a week's illness. They think that it is impossible that the reservoir could have escaped contamination from these cases of typhoid fever at that time. They give details of cases where from farms in the district the reservoir was contaminated. From the house from which the patient was removed with typhoid fever the

drainage of the farmyard and manure heaps discharges into an open drain in front of the dwelling-house and thence directly into an adjoining stream which communicates with the reservoir. In their conclusions the medical men report that in the majority of these cases the onset occurred at the end of the long period of dry weather in the month of May and seems to have been connected therewith. Owing to the very unsanitary habits of some of the inmates of these houses and the consequent certainty that the soil of the yards must at times become polluted with the dejecta of typhoid fever patients, they believe that so long as patients are treated in this careless manner in their own homes secondary cases must frequently arise from this cause, and that sometimes the lapse of time between these cases may be many months and may be determined by long periods of dry weather. The evidence they observed of the pollution of the Stoneyford reservoir with sewage matter from the numerous farms still occupied in the catchment area, and the evidence of direct contamination with sewage from houses in which typhoid fever had recently occurred, leads the medical men to believe that the water-supply is mainly responsible for the excess of typhoid fever in the district. It is satisfactory to know that there is a considerable decrease in the number of cases notified during the past week.

Close of the Summer Session at Belfast.

The summer session came to a close last week, and at the Royal Victoria Hospital most of the senior medical men are going off duty for the next two months.

July 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Paris Municipal Council and the Discharge of Infectious Cases from Hospital.

M. MARSOULAN recently brought before the Municipal Council the case of the mother of a family one of whose children had been treated at the Trousseau Hospital for diphtheria. The mother, despite the cruelty which her action entailed (for the child was at the last gasp), could not allow her son to die in the hospital and took him home. The director of the hospital tried in vain to persuade the mother not to take the child with her, pointing out that he would spread infection in the dwelling to which she took him. But nothing could shake her determination to remove him. There is no law under which the director of a hospital can refuse to allow a patient who is the subject of infectious disease to go, or to be taken out, before recovery, and M. Marsoulan rightly urged that all attempts to prevent the spread of infectious disease, such as isolation wards and antiseptic measures, are not of the least use so long as they are all made to give way to a mother's wishes. M. Marsoulan asked the council to take such measures as would give powers to the directors of hospitals by the exercise of which they could render of some effect the efforts which are constantly being made in the cause of hygiene and public health. M. Marsoulan demanded urgency for the following motion. "That as soon as possible a law should be passed by which directors of hospitals or other establishments in which cases of infectious disease are treated should be empowered to prevent such patients leaving the hospital before recovery." This motion was unanimously carried.

Railway Hygiene.

The Minister of Public Works has just addressed a circular to the railway companies wherein he recommends that the following measures should be taken with regard to the carriages and waiting-rooms. All floor coverings other than those made of linoleum or indiarubber or other easily cleansed material should be done away with. Sweeping and dry cleaning should be forbidden and be replaced by sluicing with a hose or rubbing over with a cloth wrung out of some antiseptic fluid. Pending a supply of plain cushions (which should not be buttoned down or have any folds in them) covered in some impermeable stuff which can be frequently cleansed all cushions and padding should be covered with loose covers which should be from time to time disinfected in a stove. The circular further lays down that passengers who are obviously suffering from infectious diseases should be made to travel in a special carriage which on arrival at its destination should be disinfected. Everyone will approve of these rules in so far as they bear upon cleansing and especially in the suppression of buttoned-down cushions. But the last clause will be most difficult of application. Neither the public nor railway employés are capable of deciding whether or not a person is obviously suffering from an infectious disease.

Brewer's Yeast as a Test for the Intercommunication of Springs.

At the meeting of the Academy of Sciences held on June 17th M. Miquel pointed out that it was easy to ascertain whether a well or a water-course communicated with a spring, which it might be necessary to take up as a water-supply, by throwing in a little brewer's yeast which was afterwards sought for in the water which it was desired to take up. Some of this water was to be placed in a mattrass kept in a stove at a temperature of 25° C. To every 1000 grammes of water there were to be added one gramme of tartaric acid and 200 grammes of saccharose. If the water contained yeast an active alcoholic fermentation was set up in from 24 to 48 hours. Yeast preserved its vitality in water for a long time and had been known to exhibit fermentative powers after being two months in an aqueduct 100 kilometres in length. The amount of yeast used varied according to circumstances from 10 to 40 kilogrammes.

The Law as to Workmen's Compensation and Medical Aid.

When the law as to compensation for accidents to workers came into operation everyone said that it was very imperfect and would very shortly have to be revised. No one was satisfied, neither the workmen nor the masters, and as to the medical men on whose coöperation the whole law depended it was quite obvious that as usual they were expected to give advice as a matter of charity. Modifications with regard to the following clauses have just been brought before the Chamber of Deputies. 1. The right of choosing a medical man. 2. The rate of payment of expenses. 3. The treatment of the injured in hospitals. As regards the first proposal medical men have, thanks to the efforts of M. Dubuisson, obtained this boon. The Chamber has decided that the injured man can be attended by any medical man and be supplied with medicine by any apothecary whom he may choose. This is an important modification, although it is only the application of an old rule which existed by the law of 1898 but was not very evident. As regards payment, by the law of 1898 legislators did not dare to propose that treatment of injured workmen should be gratuitous, although the certificate as to the origin of the wound was ordered to be given gratuitously. They remembered, however, that by the law of July 15th, 1893, poor persons were to be attended at a special rate and that a very low one. Accordingly in 1898 they decided that workmen injured in the course of their employment should be attended at the same rate—namely, that of the Assistance médicale gratuite. As far as the really indigent were concerned medical men had no objection to charging a very small fee, but as regards workmen injured during their employment they stood upon quite a different footing. They were not indigent, but workmen on full pay. If they had received an injury apart from their work they would have called in a medical man and would have paid him according to their means. They were workers and the law said that their employers should pay; this was not out of charity, but as a principle of justice which made the employer responsible for an injury caused by some agent which was gaining profits for him. This being so, the employer is certainly not an indigent person, and all the less in that he is protected by being insured. Insurance companies are rich, and why, then, should medical men give gratuitous attendance to a workman whose employers pay a fee which they finally get out of the insurance company? Why should a medical man give gratuitous attendance simply, as finally happens, to benefit the shareholders of an insurance company? The Chamber of Deputies has, however, adopted the usual scale of medical pay which is in use by the Assistance Publique. M. Poulain demanded in company with the Socialists that any workman should have the right of being treated at his own home, even though seriously injured. The Chamber did not agree. Every hospital in Paris or the provinces was at the service of the insurance companies. The President of the Committee argued that he could not promise that a workman would be treated at his own home, but he could if he went to a hospital where he would be well cared for and where his recovery would be more rapid

and more certain. This argument is false. Apart from very severe injuries there is no proof that a workman would not get well quite as quickly at home as in a hospital. Take, for example, fracture of the leg, a common enough accident. Why should a workman take up a hospital bed for 40 days rather than occupy his own bed for the same time? M. Poulain argued that in cases where it was necessary the medical man in attendance should be allowed to call in a consultant. But the Deputies would not listen; they put all the hospitals at the free disposal of the insurance companies so that a medical man practising in a factory town will see all his working-class surgical cases swept into hospital before his face.

July 15th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Whooping-cough.

DR. THEODORE ZANGGER has issued a *résumé* of upwards of 100 cases treated principally by preparations of quinine, which in the later cases was combined with hydrotherapeutic measures. The cases referred to were children under six years of age, the youngest being two, five, and eight weeks respectively. There was no fatal case observed, though five cases came under treatment with single pneumonia, sometimes of a very severe type. The number of paroxysms of whooping-cough never exceeded 32 in 24 hours, and they decreased rapidly during the second week of treatment. The general state of health on discharge, generally after two, three, or four weeks of treatment, was often so good that a change of air seemed unnecessary. Tannate of quinine proved of little effect; the best results were obtained from hydrochlorate of quinine dissolved in water and administered in milk in doses of from one to three grains three times a day before meals, according to the age of the patient. Very good results were also obtained from the exhibition of euchinin in the form of a powder, which has the advantage of being almost tasteless and can more readily be administered to children. The dose varied from two to six grains two or three times a day before meals. Wet packs reaching from the armpits to the ankles had a very soothing effect, when properly applied and well covered with flannel, and were left on for two or three hours or for the whole night; in case of concomitant pneumonia they can be renewed several times in 24 hours.

Sanatorium for Consumptives.

Dr. Staub, director of the Zürich Cantonal Sanatorium for Consumptives at Wald, the altitude of which is 900 metres above sea level, states in the second annual report for 1900 that a total of 231 patients was admitted, mostly poor people, for whom the daily sum of 2 francs (1*s.* 7½*d.*) had to be paid either by the parish or by private benevolent institutions if they or their friends could not pay this small sum. The results were nearly as satisfactory as in the previous year; 183 of the patients, or 79 per cent., were dismissed "improved," and 59·3 per cent. were fully capable of resuming their usual occupations. Financially the sanatorium is progressing well owing to the support of the public, it is free from debt, and it closes its yearly account with a credit balance of over £300. The cost of a single patient per day is 3*s.*, so that a deficit of £1350 was covered by the yearly subscriptions and gifts.

Zürich, July 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

THE bubonic plague still lingers on in Queensland where several fatal cases have occurred. Its existence in Brisbane necessitated an alteration in the movements of the Duke and Duchess of Cornwall. The original intention was that they should go to Brisbane by sea, but Brisbane having been proclaimed an infected port the Royal yacht would have run risks of quarantine had she gone there, so the Royal party went overland by train. It is high time that the Australian system, or rather want of uniform system, in regard to quarantine should be reorganised. It was expected that it would be one of the first things to receive attention under the Federal Government, but so far nothing has been done and every day fresh muddles occur.

Health of Melbourne.

The annual report of the Health Office of the city of Melbourne for the year 1900 is a satisfactory document. The death-rate was only 12·97 per 1000, lower than in any previous year. The average mortality for the last five years was 14·23, as against 16·29 and 19·54 for the previous quinquennial periods. The mortality from epidemic disease was low, a total of 30 as against 73 in 1899 and 106 in 1898. There was also a large reduction in the mortality from diarrhœal diseases, and among infants tuberculosis caused the greatest number of deaths, and there was no decline noticeable in its prevalence or fatality. During the year improvements in dwellings had been largely effected, 222 houses were repaired, 36 pulled down, and 11 vacated under orders from the Health Committee.

Sydney Hospital.

The Board of Management of the Sydney Hospital have just completed a handsome building at Paddington to be used as a branch dispensary for the eastern suburbs. The following appointments have been made in connexion with this dispensary: assistant physician, Dr. G. M'Lean; assistant surgeon, Dr. C. E. Corlette. Dr. Richard Arthur has been appointed assistant surgeon to the throat department at the main hospital.

Sydney University.

At the last monthly meeting of the senate of the Sydney University it was reported that the following courses of optional lectures would be delivered in the Faculty of Medicine:—Diseases of the Skin, by Dr. F. A. Bennet; Diseases of the Ear, by Mr. G. T. Hankins; Demonstrations in Psychological Medicine and Neurology, by Dr. J. F. Flashman; Diseases of Children, by Dr. A. E. Mills; and the Ethics of Medical Practice, by Dr. P. Sydney Jones. It was also decided to establish a Professorship of Pathology upon the same footing as the recent professorships in the University, and that the necessary steps should be taken to invite applications.

Bendigo Hospital.

Dr. Walter Fowler, late of Echuca, has been appointed medical superintendent of the Bendigo Hospital, Victoria.

Treatment of Sewage.

The Sydney Water and Sewage Board propose to erect a septic tank on the Scott-Moncrieff system for the treatment of sewage at Rose Bay Park—a place of public resort—and also at Balmoral Beach, a place thronged with holiday-makers on Saturdays and Sundays. The proposal has called forth great indignation and protest on the part of the public. The board and its expert officers maintain that the system is quite inoffensive in its operations and has been practically tested at the Botany Bay sewage farm. Dr. Mackellar, M.L.C., and Dr. Norton Manning, late President of the Board of Health, have sent in a report to the local councils concerned, in which they state that the septic tanks now in operation at Botany are very unsatisfactory and cause offence, and while permissible at a sewage farm as an adjunct and at places removed from population should not be erected in places of public resort.

Hospital Saturday in Sydney.

The annual collections on behalf of the Sydney hospitals were held on May 4th and proved very satisfactory, the total amount collected being £4375, a considerable increase on previous years.

Death under Chloroform.

A case of death under chloroform occurred recently at a private hospital at Darlinghurst, Sydney, somewhat exceptional from the circumstances that the victim was an infant, only 10 months old, who suddenly collapsed and the medical evidence at the inquest failed to account for the collapse.

The Medical Practitioners Act in New South Wales.

A case of some importance with reference to prosecutions under the new Medical Act was recently decided by the Full Court of New South Wales. A "Chinese doctor" was prosecuted at Queanbeyan under the Act for "using a title implying that he was a legally qualified medical practitioner—to wit, the title of physician." The man's sign read "Chinese physician and surgeon." The magistrates decided in favour of the Chinaman and the Crown appealed against their decision to the Full Court who by a majority, but not

unanimously, supported the magistrates' decision on the ground that the original information was wrongly laid under the second instead of the first section of the Act and that the words "Chinese physician and surgeon" did not imply that the man was a legally qualified medical practitioner. Under the first section of the Act it was an offence to use the word "physician" at all, but that was not the charge in this case.

Honours for Australian Practitioners in South Africa.

Surgeon-Captain N. R. Howse of the New South Wales Medical Staff has been gazetted for the Victoria Cross. He formerly practised at Orange, New South Wales. Surgeon-Captain R. Roth, also of the New South Wales Medical Staff, has been created a Companion of the Distinguished Service Order. He was Surgeon-Captain Howse's senior at Vredefort with Ridley's brigade where the action occurred which gained both officers distinction. Surgeon-Captain Howse dashed out in a hail of bullets and brought in a young trumpeter who was wounded.

Death of Dr. Dagnall Clark.

The news of the sudden death of Dr. Charles Alfred Dagnall Clark came as a great shock to the public of Sydney and his many friends. Dr. Clark was at one time physician to the Sydney Hospital and at the time of his death was on the staff of the North Shore Cottage Hospital. He had practised most successfully at North Shore for about 20 years and was held in the greatest respect for his professional skill and great kindness of heart.

June 15th.

Obituary.

GEORGE HANBY DE'ATH, L.R.C.P. LOND., M.R.C.S. ENG.

THE death is announced of this well-known and esteemed practitioner at Buckingham on Sunday, July 7th, from heart failure due to overwork and an attack of gout. The son of the late Robert De'Ath who had practised at Buckingham for many years, he was educated at Westminster and in due time entered at Guy's Hospital where he had a distinguished career as a student. He qualified M.R.C.S. Eng. in 1884 and L.R.C.P. Lond. in 1885 and on his father's early and sudden death in 1886 succeeded to the practice which he carried on with much success, though he was extremely young for so important a post.

At the time of his decease Mr. De'Ath held the appointments of coroner to the Winslow Division of North Bucks, medical officer of health to the borough of Buckingham, medical officer and public vaccinator to the Buckingham Union, and surgeon to the Oddfellows and other societies. The duties attached to these several appointments, as well as a large private practice made severe demands upon his health and strength. He was not one to spare himself in any way, being extremely devoted and conscientious towards his patients and official duties. Hence his early breakdown. He had been confined to his room for a fortnight or so with synovitis in both knees, but no danger to his life was anticipated from this cause, though it was known to himself and others that he had an enfeebled and dilated heart. Indeed, his old friend Dr. J. F. Goodhart had within a few weeks warned him to be careful and to give up his bicycle, to which he was much attached. However, after an attack of syncope on the previous evening he succumbed early on the morning of July 7th in his fortieth year. By a strange coincidence the last inquest which he held (on June 22nd) was in a case of sudden death from heart disease in the cricket field at Winslow.

To those who knew him well Mr. De'Ath was endeared by his large-hearted tolerance of the opinions of others, an unselfish devotion to his family and friends, and a warm and affectionate nature. Highly cultured and well-read, he was a successful practitioner and readily gained the confidence and esteem of his patients. He took part, too, in public affairs with keenness and skill. A politician of somewhat advanced views, he made his influence felt in local matters. He was also an able and eloquent speaker and debater and an excellent amateur actor. Many of these acquirements he learnt when at Westminster, as he was a constant attendant at the debates in the House of Commons and formed many influential friendships amongst public men. Indeed, at that time he was generally known as the "Boy Politician." One of his latest appearances on the platform was to oppose—and very successfully—an anti-vivisectionist lecturer who visited Buckingham last spring and still more recently he joined in the welcome given by the town to the Bucks Yeomen on their return from South Africa. During the occupancy of Stowe by the late Comte de Paris, Mr. De'Ath was the trusted and confidential attendant of the family and household. He was, too, the welcome adviser of many of the best families in his neighbourhood.

A member of the British Medical Association, he filled the office of president of the South Midland Branch in 1896. Mr. De'Ath was the author of works upon cholera, infant feeding, and sanitation, and contributed an interesting paper on Medical Practice which was read before the Physical Society of Guy's Hospital. But his many occupations left him little time for literary work, though he was an extensive reader in all subjects connected with his profession.

A widow and two young sons are left to mourn their loss, besides a host of friends and neighbours to whom he had become almost a necessity. His last illness was soothed by the constant attendance and advice of his partner, Mr. Howard, and his old friend Mr. Herbert Menzies. The funeral took place on July 11th, at the parish church, Buckingham, and was attended by a large number of mourners, including the mayor and corporation of the borough and many old fellow students, patients, and friends. Every mark of respect to his memory was shown by the closing of shops and other tokens of mourning. Kind and affectionate notices of his life and work have appeared in the local papers, fitting memorials of the esteem in which he was held by his fellow townsmen and townswomen.

JOHN EDWIN SCOWCROFT, M.D. ST. AND., F.R.C.S. EDIN., F.F.P. & S. GLASG., J.P., MAYOR OF BOLTON.

JOHN EDWIN SCOWCROFT, who was a well-known practitioner in Bolton, died suddenly in the early morning of July 10th, at the age of 56 years. For some years Dr. Scowcroft had taken an active part in municipal matters, and at the time of his death was mayor of the town and an alderman of, and J.P. for, the county borough. He was a member of an old Bolton family and in 1864 became an undergraduate of Durham University. He studied medicine at the Manchester and Liverpool Schools of Medicine, and was prosecter of anatomy at the Royal School of Medicine, Manchester. In 1868 he became a Licentiate of the Royal College of Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow; commencing practice in Bolton shortly afterwards he succeeded in establishing a large practice. He afterwards became F.F.P. & S. Glasgow, 1872; F.R.C.S. Edin., 1876; and M.D. St. And., 1886. He became honorary surgeon to the Bolton Infirmary and was Surgeon-Captain in the 2nd Volunteer Battalion Loyal North Lancashire Regiment. He continued to discharge the duties of his profession to the last, and being punctilious in his habits got through an enormous amount of work. He was popular as a public man and obtained a warm place in the hearts of the people of Bolton by his kindly consideration of all in the discharge of his municipal and magisterial duties. He had been ailing from time to time from some throat affection, but continued his active work, and on the night of July 9th he had been at his surgery as late as 9.30 P.M. Early in the next morning he was seized with apoplexy and died before Dr. R. Patrick or Dr. A. H. Taylor, his assistant, had time to arrive. He leaves a widow, a son, and a daughter. The son, who is a member of the profession, left a few weeks ago for South Africa. Dr. Scowcroft was interred on July 13th in the churchyard of St. Michael's, Great Lever. The funeral being of a public character there were present a large number of magistrates, members of the corporation, and heads of the different departments, as well as a number of gentlemen representing various societies and institutions.

DEPUTY INSPECTOR-GENERAL RICHARD DOMENICHETTI, M.D. EDIN., HONORARY PHYSICIAN TO THE KING.

DR. RICHARD DOMENICHETTI, whose death occurred at his residence, Collingham House, Woodhall Spa, Lincoln, on July 12th, was the eldest son of the late W. L. Domenichetti, of the 95th Regiment. He graduated in medicine

at Edinburgh in 1845, serving afterwards in the 8th King's Regiment and 1st Gordon Highlanders (75th Foot). He was appointed to the personal staff of Sir Willoughby Cotton, G.C.B., and afterwards to the staff of the late Sir H. Havelock. Dr. Domenichetti was present as senior medical officer in the actions preceding the capture of Cawnpore and the relief of Lucknow, and received the thanks of the President of the Council of India for his services before Lucknow in 1857, and was awarded the medal and clasp. The late Colonel F. C. Maude, in his work "Memories of the Mutiny," alluding to the fact that Havelock's untimely death deprived many officers of the recognition of their services, writes as follows:—"I am forced to limit my observations to the *personnel* of Havelock's column, and to select from among them the men I have personally known, whose services were the most brilliant, but yet who have received the *minimum* of recognition or reward. Foremost among these I would enumerate Delafosse, Dodson, and Domenichetti; the last-named, though a non-combatant, was our P.M.O., and in that capacity was present at every engagement until he was left behind in the Alum Bagh with the sick and wounded, in medical charge of its tiny garrison, under MacIntyre of the 78th Highlanders." Dr. Domenichetti, after retiring from the service, acted for 25 years as medical officer of health at Louth, Lincolnshire. In 1895 he was appointed honorary physician to Queen Victoria, and in 1897 was the recipient of the Queen's Jubilee medal.

Dr. Domenichetti had been in failing health for the last two years. In June, 1890, he took up his residence at Woodhall Spa, when he was found to be suffering from senile glycosuria. His bodily weakness and gradual emaciation had made such progress that he kept to his bed for the last weeks of his illness and he died in a comatose condition at the ripe age of 78 years.

Medical News.

UNIVERSITY OF GLASGOW.—The following have passed the fourth (final) professional examination:—

(*a*) *For M.B., C.M.*—Duncan Davie, William Henry Ferran, Shushil Kumar Roy, John Poynter Small, and David Wallace Smith.

(*b*) *For M.B., Ch.B.*—Martha Adams, John Anderson,† Thomas Anderson, William Archibald,† Robert Wellwood Auld,† James Oastler Barclay,† John Stoddart Barr,† William Herbert Brown,† William Macalister Brown,† George Frederick Buchan,† Ernest Cecil Burnett, Patrick Thomas Cairns, Samuel James Cameron,†‡ Robert David Campbell, Edward Seymour Chapman,† James Bertie Wylie Cook, Ernest Hamilton Cramb, Andrew Currie, David Beattie Davidson,† James Davidson, M.A.,†‡ Gregor Hugh Grant Davie, Alexander Doig, Reginald Nairn Dunlop,‡ George Balfour Eadie, William Elder, William Watt Farrar, John Forrest, John Andrew Garden, Andrew Parlane Granger, John Gregor, Mabel Hardie, George Pillans Harlan, Francis Joseph Henry, Janet Bisland Higgins,† Douglas William Hunter,† Matthew Hunter, William Johnstone Isbister, Thomas Hamilton Jack, Daniel Ross Kilpatrick, David Kyle, M.A.,*† John Lambie, Frank Joseph Lochrane, James William M'Dougall, Thomas M'Laren, Hugh Archibald M'Lean, George Williamson M'Millan, James M'Pherson, M.A.,† Edward Magoveny,*† Jacob Mains,† James Grant Millar, Robert Joseph Mills, William Archibald Mills, William Alexander Milne,† Samuel Johnston Moore, Alice Moorhouse,† Alan Howie Muir,† Robert Paterson, John Paton, James King Patrick, Mary Janet Pirret, Robert Ramsey,‡ Peter Mackenzie Reid,† William Robertson (Kilmarnock),† Thomas Ritchie Rodger, Charles James Ross, B.A., David Shannon, Agnes Bankier Sloan,† Elizabeth Macfarlane Sloan, Donald Steel,* John Strathearn, Alexander Dey Thompson,*†‡ James Nathanael Todd, Joseph Goodwin Tomkinson,† John Wright Turner, Robert Warden Valentine,‡ Albert Ernest Wainwright,† James Walker,†‡ George Smith Wallace, Peter Millar Waugh, and William Webster Watt Wilson.

* Attained distinction in surgery and clinical surgery; † attained distinction in practice of medicine and clinical medicine; ‡ attained distinction in midwifery.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS.—The annual meeting of the governors and supporters of the Hospital for Epilepsy and Paralysis and other Diseases of the Nervous System was held on June 26th, at the hospital, when the Right Rev. the Bishop of Stepney presided. The Chairman, in moving the adoption of the report, said that he had heard with deep regret of the present necessity for closing the in-patient department, and it seemed a hard case and a deplorable wrong that a hospital capable of doing so much good, and having done so much in the past, should meet with such a crisis in its affairs. Canon Barker said he felt that the committee were not only to be condoled with but also to be congratulated, seeing that firstly they had secured a site for a projected building, and that secondly, after the purchase of the site, they had still in hand a sum of no less than £12,000. He considered that this hospital had done a splendid work, even in a building which was admittedly at best a makeshift and imperfectly adapted for its purpose, and it was now going to have a really beautiful home, where it would be housed in a way difficult to improve upon. The report having been unanimously adopted general business was transacted and the meeting terminated with a vote of thanks to the chairman.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. G. Hett, M.D. Edin., M.R.C.S. Eng., L.S.A., was the recipient, on July 5th, of a silver watch from the members of the Westbourne Provident Medical Dispensary. The watch bears the following inscription:—"Presented to Dr. Hett by his patients and friends in the Westbourne Provident Medical Dispensary, in acknowledgment of his untiring devotion to this institution for twenty-six years."—Mr. E. Lynes, M.D. St. And., M.R.C.S. Eng., L.S.A., J.P., on his retirement as surgeon of the Earl of Craven Lodge (M.U.) of Oddfellows after 37 years of service has received from the officers and brethren a marble clock bearing the inscription: "Earl of Craven Lodge, M.U. Presented by the officers and brethren to Dr. E. Lynes as a small token of their appreciation of his ability, kindness, and attention during the 37 years he held the position of surgeon to the lodge."—Mr. J. H. Carson, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Crumlin, Ireland, was presented on July 4th with a purse of sovereigns and a tastefully illuminated album containing the addresses and signatures of subscribers and photographs of places of interest in the district, the occasion being the eve of his departure to take up practice in England.—Mr. J. J. Hanly, L.R.C.P., L.R.C.S. Edin., who is leaving Bath to take up a practice in Alderney, has received from the inhabitants in the neighbourhood of Chewton Mendip, Binegar, and Oakhill an illuminated address, which reads as follows:—"To Dr. J. J. Hanly, M.A., Lancet House, Oakhill, Bath. Dear Sir,—It is with deep regret we, the undersigned, hear that you purpose to leave this neighbourhood. During the time you have resided amongst us we have always found you most courteous and attentive to your duties. Your professional skill and services will be greatly missed, especially by the poor. We wish you, Mrs. Hanly, and family every success in your new sphere of labour, and trust health and prosperity may attend your footsteps. We are, yours very sincerely."—A gold bracelet was also presented to Mrs. Hanly by the workers and the poor of ten parishes, as a token that they "had not forgotten the wife of a hard-working doctor." Mr. Hanly has obtained the Government grant for successful vaccination.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on July 10th, at 8.30 P.M. The chair was taken by the President, Mr. Christopher Heath. Seven new members were elected, and the deaths of four members were reported and the election of a member was declared void. Two fresh applications for grants were read from widows, and grants at the rate of £50 a year were made. It was resolved that a sum of £1284 should be distributed among the 52 widows, 14 orphans, and six recipients from the Copeland Fund. The expenses of the quarter amounted to £45 13*s*.

THE BRISTOL BOARD OF GUARDIANS AND THE TREATMENT OF PHTHISIS.—The Bristol Board of Guardians have been recently discussing the treatment of their phthisical patients, and on June 15th a committee urged the desirability of obtaining a suitable house in the country for the better treatment of the cases of phthisis (at present 34 men and seven women) in their workhouse infirmary. At the meeting held on July 11th a report was presented from the hospital committee recommending the provision of a home at Clevedon. They suggested a building named "Hallam Hall," which could be fitted up to provide accommodation for 35 male and a similar number of female patients. The estimated expenditure was £600 yearly. The committee considered that by means of such a home the pressure of the workhouse infirmaries would be relieved, and from information received from the district medical officer an average of about six out-door poor cases could be sent weekly. After some discussion the guardians referred the matter back to the committee to reconsider and to report upon as to a lease of the building being arranged for 14 years, including a provision entitling the guardians to purchase at a given price at any time during the term.

BRITISH DENTAL ASSOCIATION. — MR. J. L. Robertson of Cheltenham being the President-elect, the Central Counties Branch of the British Dental Association held its annual meeting in Cheltenham on July 12th and 13th. At the business meeting the following officers were elected: President for 1902-3, Mr. J. Mountford, L.D.S. Eng. (Birmingham). Vice-Presidents: Mr. A. E. Donagan, M.A. Cantab., L.D.S. Edin. (Birmingham), and A. E. Vickery, L.D.S. Ireland (Coventry). Representative on the Council of the British Dental Association, Mr. H. R. F. Brooks (Banbury). Honorary treasurers: Mr. Malcolm Knott, L.D.S Glasg. (Birmingham), and Mr. G. F. Cale Matthews, L.D.S. Eng. (Birmingham). The secretary's report showed that the membership had increased from 66 to 71 in the branch this year.—Mr. Vickery, the retiring president, gave a brief valedictory address at 6.30.—Mr. J. L. Robertson, who was cordially greeted on rising to make his first speech as President, said, in the course of his remarks, that, like their retiring President, he was strongly of opinion that more attention should be devoted to the mechanical department of dentistry. He thought that a good deal of the time that was devoted to surgical science might be more profitably employed in the workshop.—The President afterwards entertained the members and several local friends (including the Mayor of Cheltenham) to dinner at the Queen's Hotel.—On July 13th papers of a technical nature were discussed, and at noon Mr. Robertson invited the members to his house at Withington, where lunch and tea were provided, and the programme included a drive through Lord Eldon's estate to the Roman Villa.

EASTERN COUNTIES ASYLUM FOR IDIOTS. — The annual meeting of the friends and subscribers of the Eastern Counties Asylum for Idiots, which was held at Norwich under the presidency of the Duke of Norfolk, was the occasion of much well-deserved congratulation. In moving the adoption of the annual report the president of the meeting concluded his remarks by alluding to the charity as one of which the eastern counties ought to be proud—a charity in which implicit confidence could be placed and which it was a privilege to be allowed to help. Sir Frederic Bateman, the Mayor of Norwich, the Dean of Norwich, and the sheriff (Mr. Cozens Hardy) were no less complimentary in their comments upon the institution, and the very large number of persons present proved that the expressions of these speakers as to the way in which the charity was administered and managed were no mere exaggerated statements, but really represented a substantial feeling of confidence and determination for future support. Necessity for sanitary reform had involved the asylum in unusual expenses by which a deficit had been incurred. It was satisfactory to hear that this was already made good except for a comparatively small amount which the authorities of the institution appealed with confidence to the public to supply. One of the most satisfactory features of the asylum is the success with which different forms of employment have been adopted for bringing out and developing the least talent or ability that a patient may possess. Some of the work of the feeble-minded inmates of the Eastern Counties Asylum might well be acknowledged with pride even by artificers more fortunately endowed from birth with proper brain development.

THE APPOINTMENT OF POLICE SURGEON AT EXETER.—There has recently been some friction at Exeter between the town council and the police surgeon and the appointment has been advertised. At the meeting of the town council held on July 10th it was reported that there were only two applicants for the post. One of the members stated that he considered that it would be a great mistake if the council made the appointment under the circumstances; they had a gentleman who for many years had discharged the duties to the satisfaction of everyone and now it was proposed to select as his successor one of two gentlemen neither of whom was known to the citizens. Another speaker thought it a reflection on the council that only two candidates had applied and considered that the medical profession had boycotted the council. Eventually one of the two applicants was elected, several members refraining from voting.

A HEALTHY VILLAGE.—The village of Norton-Fitzwarren in Somerset has shown a remarkable freedom from death during the past 12 months, for not one death was registered from June 21st, 1900, to June 24th, 1901. The village has a population of over 600 and the lowest number of deaths that had ever previously occurred in one year was five.

THE HOSPITAL OF ST. JOHN AND ST. ELIZABETH, ST. JOHN'S WOOD.—The Lord Mayor, accompanied by the Lady Mayoress and the Sheriffs of the City of London, paid a visit in full civic state on July 15th to St. John's-wood and opened the new buildings in Grove-end-road of the Hospital of St. John and St. Elizabeth. The civic party were received by the Duke of Norfolk (President of the hospital), Lord Clifford of Chudleigh (chairman of the Board of Management), the Mayor of Marylebone (Mr. Boulnois), and the Mayoress. The hospital, which has been transferred from Great Ormond-street, Bloomsbury, will afford accommodation for 110 in-patients. Lord Clifford of Chudleigh, addressing the Lord Mayor, said that the hospital was founded in 1856 and its object was the reception of patients suffering from incurable or long-standing disease. To support the hospital with its present number of patients an income of about £2000 a year was required, and £1000 a year in addition would enable the hospital to be kept full. In his reply the Lord Mayor referred to the fact that the hospital was open to the afflicted of all shades of religious opinions and he heartily wished it success.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following is the prize list for the summer session, 1901:—Carmichael Scholarship, £15: W. R. Ormsby. Mayne Scholarship, £15: J. P. Byrne. Gold and Silver Medals in Operative Surgery: gold medal, C. W. Ewing; silver medal, A. Charles. Stoney Memorial Gold Medal in Anatomy: R. W. Burkitt. Practical Histology: A. N. Crawford, first prize (£3) and medal; J. S. Sheill, second prize (£1) and certificate. Practical Chemistry: E. J. Clarke, first prize (£3) and medal; J. M. Hayes, second prize (£1) and certificate. Public Health and Forensic Medicine: Miss J. C. Hargrave, first prize (£3) and medal; S. B. Hanbury, second prize (£1) and certificate. Materia Medica: J. S. Sheill, first prize (£3) and medal; J. McQuillan, second prize (£1) and certificate. Practical Pharmacy: Miss C. O'Meara, first prize (£3) and medal; J. M. Alcorn, second prize (£1) and certificate. Biology: R. Bury, first prize (£3) and medal; F. X. Costello, second prize (£1) and certificate. The schools of surgery will resume work after the summer recess on Tuesday, Oct. 1st.

AUGUST BANK HOLIDAY ON THE CONTINENT.—The Great Eastern Railway Company announce that for the convenience of holiday-makers on the continent cheap tickets will be issued to Brussels available for eight days *viâ* Harwich and Antwerp. Passengers leaving London in the evening are timed to reach Brussels the following morning. Tickets at cheap fares will be issued by the Antwerp route to Berne from July 24th to 27th. For visiting The Hague, Amsterdam, and other parts of Holland, the Rhine, North and South Germany, and Bale for Switzerland, special facilities are offered *viâ* the Great Eastern Railway Company's Royal British Mail Harwich-Hook of Holland route, through carriages being run to Amsterdam, Berlin, Cologne, and Bale. There is a restaurant car on the North and South German express trains to and from the Hook of Holland. The General Steam Navigation Company's fast passenger steamers will leave Harwich for Hamburg on July 31st and August 3rd, returning August 4th and 7th.

VACCINATION NOTICES.—At the meeting of the Pwllheli Board of Guardians held on July 10th, the public vaccinator drew attention to the fact that the vaccination forms were in English and that this rendered them practically useless in the rural districts, and added that in somes places the forms had been mistaken for bills. After some discussion it was decided to request the Local Government Board to supply vaccination notices written in Welsh, and it was further determined to ask all the Welsh boards of guardians to adopt similar resolutions.

THE HEALTH OF CRICCIETH.—At the meeting of the Criccieth Urban District Council held on July 6th the medical officer of health reported that the death-rate for 1900 was 11·8 per 1000, the estimated population being 1700. The council decided to support the scheme of the Carnarvonshire Joint Sanitary Committee to appoint a bacteriologist for one year and so to add to the precautionary measures for the prevention of the spread of infectious diseases.

VACCINATION GRANT.—Mr. W. G. Evans, medical officer of the Second District, Frome Union, has been awarded the Government grant for successful vaccination for the eighth time.

FUNERAL OF SURGEON J. G. CORRY, R.N.—The funeral of Surgeon J. G. Corry, R.N., took place in the Plymouth Cemetery on July 10th with full naval honours. The band of the *Vivid* led the procession, followed by over 100 sailors from the naval barracks. The field carriage, on which was placed the coffin, was drawn by bluejackets. The father of the deceased, Mr. J. Corry of Donegal, was present, and officers from the barracks and ships at Plymouth and Devonport acted as pall-bearers.

THE BRISTOL LIFEBOAT SATURDAY FUND.—At a meeting held on July 10th it was decided that a special effort should be made for the Bristol Lifeboat Saturday Fund, it being pointed out that in the last three years Bristol had contributed £1161 to the funds of the Lifeboat Institution—a decrease of £934 as compared with the previous three years.

MEDICAL MAGISTRATES.—Mr. F. H. Tinker, L.R.C.P. and L.M. Edin., M.R.C.S. Eng., has been placed upon the Commission of the Peace for the County of Cheshire.—Mr. W. Moxon, M.D. Durh., M.R.C.S. Eng., L.R.C.P. Ed., has been placed on the Commission of the Peace for the County of Derby.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Registration of Plumbers.

IN the House of Lords a Bill to establish a system of registration for plumbers has been introduced by Lord GLENESK. Obviously at this period of the session its chance of passing into law is slight.

Sale of Intoxicating Liquor to Children.

The Bill to prevent the sale of intoxicating liquor to children is now before the Grand Committee of the House of Commons on Law, where already it has been altered in several important particulars. The limit of age, for instance, has been reduced from 16 to 14 years, and the difficulty with regard to the delivery of liquor has been met by the insertion in the second clause of words exempting from the scope of the proposed legislation delivery at the residence or working-place of the purchaser.

Condition of the Concentration Camps.

A committee of ladies is to be appointed by the War Office to go out to South Africa and to inquire into and to report upon the condition of the various concentration camps.

HOUSE OF COMMONS.

THURSDAY, JULY 11TH.

Influenza among Horses.

Mr. HERMON-HODGE asked the President of the Board of Agriculture whether he was aware that an epidemic of infectious fever resembling influenza was prevalent amongst horses in New York; and whether, in view of the fact that more than one-half of the horses imported into this country come from the United States of America, he could inform the House what steps were being taken at our ports to discover and, if possible, to check the importation of infected animals—Mr. HANBURY said: In answer to inquiries through the Foreign Office as to the reported epidemic amongst horses in New York I have received the following telegram: "Mild and local epizoötic laryngeal influenza prevalent in New York and Brooklyn. Horses for export to United Kingdom which are chiefly drawn from western and middle States appear to be unaffected. All horses are examined before shipment by Government inspectors and as yet none are reported to have been rejected; they are kept in Government stockyards and have little chance of infection." The local authorities at most of the principal ports are continuing to inspect imported horses as they arrive. At the Port of London we are taking steps to supplement the information obtained at the other principal ports by inspection on the part of our own officers. Upon the results of this inspection will depend the question whether there is sufficient evidence of disease to require further administrative action.

Burial Scandal at Tottenham.

Mr. WILLIAM REDMOND asked the Home Secretary whether his attention had been called to a case last Wednesday at the Tottenham Police Court, when it came to light that the body of a child had been lying for 10 days in the Tottenham mortuary owing to a dispute between the local authorities as to who was liable for the expense of burying it; and whether he would cause a strict inquiry into this case to be held.—Mr. RITCHIE replied: I am informed by the police that the child died on June 24th. The father applied for a burial order on the 28th but the relieving officer did not feel justified in giving the order, because he thought the father could afford to bury the child himself. He was told, however, that the application would be referred to the guardians at their meeting on July 3rd, and on that day the guardians granted an order for the burial, the expense to be advanced on loan. I have no authority to interfere, but I cannot help expressing my regret that such an occurrence should have taken place.

Enteric Fever in the 2nd Worcestershire Regiment.

Sir WALTER FOSTER asked the Secretary of State for War if he could state how many men of the 2nd Worcestershire Regiment were on the sick list when the regiment reached Bloemfontein in May, 1900; how many men of the regiment suffered from enteric fever during the stay of the regiment at Bloemfontein, and the number of deaths; how many of the men were left sick from enteric fever when the regiment left Bloemfontein; and how many died from enteric fever in the two months after the regiment had left.—Mr. BRODRICK replied: The regiment reached Bloemfontein in the week ending April 6th, 1900, and had 19 admissions to hospital for all causes during the march thither from Norval's Point. Of these 12 were discharged to duty soon after arrival. During their stay at Bloemfontein up to May 25th there were 14 deaths from enteric fever and from May 25th to July 27th there were 15 deaths from enteric fever. No further statistics are available.

The Hospital Ship "Maine."

Mr. ARNOLD FORSTER announced that it is proposed by the Admiralty to send the hospital ship *Maine* to the Mediterranean at an early date.

FRIDAY, JULY 12TH.

Infectious Diseases Hospital for Wakefield.

Mr. PICKARD asked the President of the Local Government Board whether his attention had been called to the fact that the Wakefield Corporation had applied to the Local Government Board for sanction for a loan for the purchase of a site for an infectious diseases hospital for the use of the city of Wakefield, and that this site was outside the city of Wakefield and within the urban district of Stanley where there was a growing urban population, and that the hospital was proposed to be placed in one of the best building districts of Stanley; and seeing that objection was taken to the erection of the hospital by the inhabitants of Stanley whether before sanctioning the loan he would cause special inquiry to be made as to whether there was a suitable site for such hospital within the boundary of the city of Wakefield or in places contiguous thereto which were purely agricultural and where there would be no interference with building development.—Mr. WALTER LONG replied: A local inquiry has recently been held by one of the inspectors of the Local Government Board with regard to an application for sanction to a loan for the purchase of a site for the proposed hospital. I have not at present received the inspector's report as to the inquiry, but when it comes before me I will give careful consideration to the matters referred to in the latter part of the question.

MONDAY, JULY 15TH.

Burial Scandal at Greenwich.

Mr. MURPHY asked the Home Secretary whether his attention had been called to the cases of burial which recently occurred in the Greenwich Union by reason of which several people had been interred under incorrect names; whether he was aware that Roman Catholic inmates had been buried in the Protestant cemetery and *vice versâ*, and could he say what steps had been taken to prevent similar irregularities in future; and what was the reason of the delay in complying with the application for leave to exhume the bodies already interred in this manner.—Mr. RITCHIE replied: The grave irregularities which have occurred recently in connection with the burial of inmates of the Greenwich Workhouse and Infirmary have been brought under my notice by the guardians who have adopted the report of a special committee recommending the punishment of the officials mainly responsible and the adoption of regulations designed to prevent any recurrence of such scandals in the future. In only one case has application been made to me for a license to remove remains—by a husband who desired that they should be reinterred in a private grave—and the license was granted without undue delay.

TUESDAY, JULY 16TH.

Dental Provision for the Troops.

Colonel BROOKFIELD asked the Secretary of State for War whether the attention of the military authorities had been called to the amount of suffering caused in the South African Field Force by the diseased and neglected condition of the soldiers' teeth; whether he could state what arrangements were at present made for providing dental surgical attendance for the field force, and whether the number of dental surgeons now employed had been reported as adequate; whether this subject was included in the matters now under consideration by the committee which was to report on the Royal Army Medical Corps; and whether the Government, in view of the importance of the whole question in time of peace as well as in time of war, were giving it their serious attention?—Mr. BRODRICK replied: The question of providing dental surgical attendance for the troops in South Africa has been and is receiving attention, and four dentists were despatched thither on June 17th. In addition a number of refugee dentists have been employed with the troops.

Death Certification in Scotland.

Mr. EUGENE WASON asked the Lord Advocate whether he was aware that the law was constantly being violated in Scotland in the registration of the deaths of paupers in workhouses, by persons signing a certificate that they were present at the death, when, as a matter of fact, they had been elsewhere; and whether he would be prepared to take such steps as would secure that the law was complied with, and that the penalty which attached to a person signing a certificate under such circumstances was enforced.—The LORD ADVOCATE replied: I am not prepared to accept the accuracy of the general statement as to the violation of the law made in the first paragraph of the hon. Member's question. On the contrary, I am informed by the Registrar-General for Scotland that he has no knowledge of any circumstances giving rise to the question and that instructions are prefixed to every registration book, for the guidance of registrars, from which and from the list of questions which must be answered by the informant of a death, it will be seen that it is the practice to require the informant in each case to state whether he was present at the death.—Mr. EUGENE WASON asked the Lord Advocate whether, if he supplied him with the information in his possession, inquiry would be made.—The LORD ADVOCATE replied that he would pass on the information to the registrar-general, who no doubt would make inquiry.

The Position of Dr. W. Scott Tebb at Penge.

When the House was in Committee of Supply on the vote for the salaries and expenses of the Local Government Board Captain NORTON called attention to the refusal of the Local Government Board to sanction the appointment of Dr. W. Scott Tebb as medical officer of health of Penge, because of his views with regard to vaccination. He claimed that the local authority was quite alive to its responsibilities and that it ought not to be overruled in this way.—Sir MICHAEL FOSTER said that Dr. Tebb was one of his pupils and he had a high opinion of his character and ability, but he

had read his book on vaccination and he thought that the refusal of the Board to sanction the appointment was perfectly justified. He could not conceive how anyone holding the views of Dr. Tebb could be a proper instrument for carrying on the combat against small-pox in this country where vaccination was the legalised method.—Sir WALTER FOSTER said that, in his opinion, the President of the Local Government Board was right when he felt that it would be a very dangerous experiment to appoint as a medical officer of health one who had published opinions strongly criticising the efficiency of vaccination.—Mr. WALTER LONG said that so long as he was responsible for the Local Government Board no power on earth would induce him to sanction the appointment as a medical officer of health of a man who held the views of Dr. Tebb with regard to vaccination.—Mr. CORBIE GRANT protested against the action of the right hon. gentleman. In his opinion Dr. Tebb was being punished for conscientiously holding certain views with regard to vaccination, though as a medical officer of health he would have nothing to do with vaccination.—Mr. WALTER LONG said that a medical officer of health would have a great deal to do with vaccination in the event of his district being invaded by an epidemic of small-pox.—Mr. CORBIE GRANT said that it was evident that we were passing from the tyranny of the priests to that of the doctors, and he thought that the latter was the greater evil. The local authority was prepared to entrust Dr. Tebb with this work and there was no suggestion that he was unfit for it, and as a protest he would move the reduction of the vote by £100.—Mr. SHIPMAN also protested against the action of the Local Government Board.—On a division being taken the motion to reduce the vote was rejected by a large majority.

THE NEW FACTORY AND WORKSHOP LEGISLATION.

PROCEEDINGS IN THE GRAND COMMITTEE.

The Grand Committee of the House of Commons on Trade is steadily working its way through the clauses of the Bill of the Government to amend the Factory and Workshop Acts. At the meeting of the committee on Thursday, July 11th, several points of special interest to medical men were discussed. They arose chiefly in connexion with Clause 25 which provides for the issue of certificates of fitness by certifying surgeons to children and young persons. Mr. TENNANT proposed to insert in this clause the following words—viz.: "For the purpose of determining whether he shall grant such certificates and whether he shall impose such conditions, a certifying surgeon may at any reasonable time enter, inspect, and examine any factory or workshop within his district and any part thereof, and may observe any process which is carried on in the factory or workshop, and any person who delays or obstructs a certifying surgeon in the exercise of this power shall be liable to a fine not exceeding £5." The hon. Member expressed the opinion that in a matter of this kind the certifying surgeon should have the same power as the Home Office inspector, and that any person who delayed or obstructed the former should be liable to a penalty.—Mr. RITCHIE, the Minister in charge of the Bill, thought that the proposal of the hon. Member went too far, but said he would be prepared to insert in the clause these words: "A certifying surgeon shall have the same powers as an inspector for the purpose of examining any process in which a child or young person presented to him for the granting of a certificate is proposed to be employed."—Mr. TOMLINSON insisted that a certifying surgeon, however well equipped he might be for the work of his profession, could not reasonably be expected to have the knowledge necessary to enable him to decide whether or not a particular process of manufacture was suitable for the employment of a child or young person.—Mr. TENNANT asked the Home Secretary whether he would not make provision for a penalty.—Mr. RITCHIE replied that he did not think such provision was necessary because the certifying surgeon could always withhold his certificate.—Mr. TENNANT withdrew his amendment and the Committee accepted the words offered by Mr. Ritchie.—Mr. TENNANT then proposed to insert in the clause these words—namely, "A certifying surgeon shall not examine any person for the purpose of a certificate of fitness for employment unless adequate means of privacy are provided for the examination."—Mr. RITCHIE thought that it would be a mistake to lay down a regulation of this minute character and Mr. TENNANT did not press his amendment.—Mr. TENNANT next moved an amendment requiring certificates of fitness for workshops as well as for factories. He said that many representations had been made to him by certifying surgeons and others to the effect that the health of children and young persons was undermined by employment of an unsuitable nature in workshops. In experience it was found that a child or young person might be refused a certificate for employment in a factory and then went to a workshop and obtained employment there.—Mr. RITCHIE said that the position of the law at present was that no certificate of fitness was required by law in the case of a workshop, but there was a power on the part of the Secretary of State to order that in any class of workshop where he considered it requisite a certificate should be required. The reason for the distinction between a factory and a workshop was perfectly clear. A factory, as a rule, was a place where machinery of various kinds, some of it dangerous, was in use. In a workshop this condition did not arise, and many workshops were extremely small. On the whole he did not think it necessary to extend the existing law.—Mr. TENNANT said that he was disappointed with this answer. If a girl got employment in a clothing factory her machine was worked by power; if she went into a dressmaker's workshop she had to turn the machine with her foot, and everybody knew that the very worst class of sweating went on in dressmakers' shops. He did not see, therefore, why a certificate of fitness should be required in the one case and not in the other.—On a division the proposal of Mr. Tennant was rejected by 38 to 25 votes.—The HOME SECRETARY agreed to accept an amendment in the name of Mr. Tennant repealing the paragraph in the principal Act which provides that the occupier of the factory may deduct the certifying surgeon's fee or part of it from the wages of the person for whom the certificate is granted.—Sir JAMES RANKIN asked the Home Secretary whether under this clause the certifying surgeon would be entitled to examine a secret process of manufacture.—Mr. RITCHIE replied that he would only have power to inspect the process in which it was proposed to employ the child or young person and that consequently the matter would rest entirely in the hands of the employer.

At a later stage in the proceedings Clause 28, dealing with bakehouses, was discussed. This clause proposes that after Jan. 1st, 1904, an underground bakehouse shall not be used unless certified by the district council to be suitable for that purpose, and that an underground bakehouse shall mean a bakehouse any room of which is so situate that the surface of the floor is more than three feet below the surface of the footway of the adjoining street or of the ground adjoining or nearest to the room.—Mr. RENSHAW said that some people had come to the conclusion that under this clause all bakehouses three feet below the surface of the roadway would be disallowed.—Mr. RITCHIE explained that this was not the case. Such bakehouses would not be prohibited if a certificate were got from the local authority. Of course, the clause only referred to old bakehouses; new ones were provided for by the existing law. There was a great scandal in connexion with these old underground bakehouses and he thought that they should not be allowed to go on for all time. While he said this he was prepared to extend the allowance of time to Jan. 1st, 1906, instead of Jan. 1st, 1904, as proposed in the clause.—Mr. JOHN BURNS urged the Home Secretary not to make this concession and quoted articles in THE LANCET and other journals as to the present deplorable state of things. He thought that their owners had had sufficient notice of the intention and desire of the legislature to put a stop to these unhealthy and unsuitable bakehouses.—Sir HENRY FOWLER and other members of the Committee spoke in support of Mr. Burns and Mr. Ritchie announced that he would stand by the date in the clause. An amendment to change the definition of an underground bakehouse to a place the ceiling of which was less than six feet above the surface of the roadway was rejected by the Committee by a large majority.

The Grand Committee met again on Monday, July 15th, and made substantial progress with the Bill. There was some further discussion on the underground bakehouse clause.—Mr. PARKES moved to insert in the clause a provision that no certificate shall be refused by a district council where the underground bakehouse complies with the existing Acts of Parliament regulating underground bakehouses.—Mr. RITCHIE, in opposing this amendment, said that the existing Acts were not enough, for it was notorious that baking was carried on in premises which were wholly unsuitable.—Captain JESSEL thought that a slur had been cast upon the local authorities in London, many of whom had been very energetic in enforcing the law and securing a better state of things in bakehouses.—Sir JOHN STIRLING-MAXWELL suggested that if an appeal from the decision of the district council were given the case would be sufficiently met.—Mr. RITCHIE said that he was prepared to give an appeal to a court of summary jurisdiction.—The amendment was thereupon withdrawn and words were inserted in the clause providing for an appeal in the case of a refusal of a certificate to a court of summary jurisdiction. The clauses dealing with humidity and temperature were passed by the Committee practically without alteration. Clause 31 provides that in any factory or workshop where lead, arsenic, or other dangerous substance is used a person shall not be allowed to take a meal or to remain during the times allowed for meals in any room in which any such substance is used and suitable provision shall be made for enabling the persons employed in such rooms to take their meals elsewhere in the factory or workshop.—Mr. SETON-KARR thought that this clause imposed unnecessary restriction and expense upon employers and moved to alter the clause so as to read "where preparations of lead are manipulated." He also suggested to the Home Secretary that it should be made a punishable offence for an employé to eat anything in a place where preparations of lead were manipulated.—Mr. RITCHIE explained that the wording of the clause had been taken from the Act of 1895, and to alter it would only introduce confusion in interpretation. The intention of the clause was that these matters must not be present in any factory in anything like a dangerous condition and if they were then the meals must be taken outside. Of course if the words were interpreted in their literal sense it would be impossible for a person to take a meal in a room where a window was being inserted in a leaden frame. No court would so interpret the law. He did not wish to see the clause altered, but preferable words to those proposed by the hon. Member would be "used so as to be a source of danger to health."—Mr. TENNANT urged the Home Secretary not to accept either form of words.—Mr. SETON-KARR withdrew his amendment and moved to insert the words mentioned by the Home Secretary. After a long debate the Committee rejected the words by a large majority. The clause consequently remained unaltered.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ANDREWS, W. H., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth District Kingsbridge (Devon) Union, vice H. Osborne Grenfell, resigned.

CARGILL, L. VERNON, F.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Surgeon to the Royal Eye Hospital, Southwark.

DUNLEA, M. P., M.D. R.U.I., has been appointed Certifying Surgeon for the Riverstown District in the County of Cork.

FAGAN, P. J., L.R.C.P. Irel., has been appointed Lecturer on Elementary Physics in the Catholic University Medical School, Dublin.

GROVES, W. G., M.R.C.S. Eng., L.S.A., has been re-appointed Medical Officer of Health of Woodburn Urban Sanitary District.

HAMILTON, W. M., M.D. R.U.I., has been appointed Medical Officer of Health of Eccles Municipal Borough.

HARRIS, J. H., M.R.C.S Eng., L.S.A., has been re-appointed Medical Officer of Dartmouth (Devon) Urban Sanitary District.

HAYES, W. B., M.D. R.U.I., has been appointed Certifying Surgeon for the Union of Tralee, in the county of Kerry.

HAYMAN, F. D., M.R.C.S. Eng., has been appointed Medical Officer of Health of Ararat, Victoria.

HOGG, J. A., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of Health of Shardlow Rural Sanitary District.

KELLY, C., M.D. Lond., has been re-appointed Medical Officer of Health of West Sussex Combined Sanitary District.

MASON, J. J., L.R.C.P. Edin., L.R.C.S. Edin., has been appointed Medical Officer of Health of Bollington Urban Sanitary District.

MADDEVER, J. C., M.D. Glasg., has been appointed Certifying Surgeon for the Brownhills and Aldridge District of Staffordshire.

MCANALLY, EDWARD A., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Public Vaccinator to the No. 1 (Rainham) District of the Milton Union.

MCCLEARY, G. F., M.B. Camb., L.S.A., has been appointed Medical Officer of Health of Battersea Metropolitan Borough.

MCDONALD, G. B. D., M.B., M.S. Aberd., has been appointed Medical Officer of Health of Portlandshire, Victoria.

MEACHEN, G. NORMAN, M.B., B.S. Lond., M.R.C.P. Edin., M.R.C.S., has been appointed Clinical Assistant to the Hospital for Diseases of the Skin, Blackfriars.

MILLARD, C. K., M.D. Edin., has been appointed Medical Officer of Health of Leicester County Borough.

MUIRHEAD, JAMES, M.B., B.S. Durh., has been appointed Senior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

NORTON, JOHN, M.D. Durh., D.P.H., M.R.C.S. Eng., has been appointed Surgeon to the A Division of Metropolitan Police (Great Scotland-yard), vice Thomas Bond, F.R.C.S., deceased.

O'BRIEN, D. J., L.R.C.P., L.R.C.S., has been appointed Certifying Surgeon for the Durrow Dispensary District in Queen's County.

PECK, HERBERT, M.D., D.P.H., has been re-appointed Medical Officer of Health for the Borough of Chesterfield.

PRITCHARD, W. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon for the Bethesda District of the county of Carnarvon.

ROUTH, AMAND, M.D., B.S., F.R.C.P. Lond., has been appointed Consulting Physician to the Samaritan Free Hospital for Women, London.

STEELL, JOHN, M.B. Melb., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent of Ballarat Lunatic Asylum, vice R. W. Leethbridge, transferred.

TREDINNICK, A. S., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Certifying Surgeon for the Melbourne District of Derbyshire.

VALENTINE, THOMAS H. A., M.R.C.S. Eng., L.R.C.P. Lond., D.P.H., has been appointed Health Officer to the Wellington District, New Zealand.

VALLACK, A. S., M.B., C.M. Syd., has been appointed Medical Officer and Vaccinator at Bowral.

WATKINS, J. W., M.B., B.S. Dubl., has been appointed Certifying Surgeon for the Bolsover District of the county of Derby.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AYR COUNTY HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BOROUGH OF BLACKPOOL.—Medical Officer of Health. Salary £400 per annum, rising to £500.

BRADFORD HOSPITAL AND WORKHOUSE.—Second Resident Assistant Medical Officer. Salary £100, with rations, apartments, and washing.

CARLISLE DISPENSARY.—Resident Surgeon, unmarried. Salary £150 per annum, with apartments.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon. Salary £70 per annum, with board, lodging, and washing.

CRAIGLEITH POORHOUSE AND HOSPITAL, Edinburgh.—Resident Medical Officer. Salary at rate of £100 per annum, with board and apartments.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Senior Assistant Medical Officer, unmarried. Salary £150 a year, rising to £180, with board, lodging, &c.

DAVID LEWIS NORTHERN HOSPITAL, Liverpool.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £100, with board, residence, and washing.

DEVON COUNTY ASYLUM, Exminster, near Exeter.—Third Assistant Medical Officer. Salary £125, rising to £150, with board, lodging, &c.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—House Surgeon. Salary £50 per annum, with board and washing. Also Assistant House Surgeon. Salary £25 per annum, with board and washing.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

FISHERTON ASYLUM.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Assistant House Surgeon for six months. Salary £40 per annum, with residence, board, and washing.

HALIFAX UNION HOSPITAL, Salterhebble.—Resident Medical Officer. Salary £140 per annum, with apartments, rations, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £80 per annum, with board and lodging.

HOSPITAL FOR SICK CHILDREN, Newcastle-on-Tyne.—Resident Medical Officer. Salary £100, with board, lodgings, and laundry.

HULL ROYAL INFIRMARY.—Casualty Officer. Salary £80 per annum, with board and lodging.

HULME DISPENSARY, Manchester.—Honorary Physician.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 a year, with board and lodging.

LEICESTER INFIRMARY.—Clinical Clerk and Dresser. Honorarium £10 10s. for six months, with apartments, board, and washing.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

LONDON HOSPITAL, Whitechapel, E.—Assistant Director of the Pathological Institute. Salary £200 per annum.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham-hill-road.—Honorary Physician.

MONSALL FEVER HOSPITAL, Manchester.—Third Medical Assistant. Salary £100 per annum, with board and lodging.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing, and at least £10 at the end of six months.

NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh.—Second Assistant Medical Officer. £120 per annum, increasing to £160, with board, residence, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Assistant Physician.

NOTTINGHAM GENERAL DISPENSARY.—Two Assistant Resident Surgeons, unmarried. Salaries £160 per annum each, increasing by £10 every year, with furnished apartments, attendance, light, and fuel.

OLDHAM INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, washing, and residence.

PARISH OF GLENELG, SOUTHERN DIVISION.—Medical Officer. Salary £120 per annum.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100, increasing by £10 a year, with board (excluding stimulants) and apartments.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Assistant Surgeon.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with furnished apartments, board, and washing.

ROYAL SEA-BATHING HOSPITAL, Margate.—Two Resident Surgeons, a Senior and Junior. Salary £120 and £80 per annum, with board and residence.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with rooms, board, and washing. Also Locum Tenens for Junior House Surgeon.

RURAL DISTRICT COUNCIL OF AUCKLAND.—Medical Officer of Health. Salary £350 per annum.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon. Salary £100, with board, lodging, and washing.

ST. BARTHOLOMEW'S HOSPITAL, Rochester.—Assistant House Surgeon. Salary £100 per annum, with board, washing, &c.

ST. MATTHEW, BETHNAL-GREEN INFIRMARY, Cambridge-road, N.E.—First Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and laundry.

SALOP INFIRMARY.—Assistant House Surgeon. Salary at the rate of £40 per annum, with board and washing.

UNIVERSITY OF SYDNEY, New South Wales.—Professor of Pathology. Salary £900 per annum. Pension £400 per annum after twenty years' service. £100 allowed for passage.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary £75 per annum, with board, residence, &c.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Physician for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing. Also Assistant House Surgeon for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon. Salary £70 per annum, with board, residence, and washing.

WORKSOP DISPENSARY AND VICTORIA HOSPITAL.—House Surgeon and Dispenser. Salary £150 per annum, with rooms and attendance.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

The Chief Inspector of Factories gives notice of vacancies for Certifying Surgeons under the Factory Acts at Oundle, at Pontypridd, and at Bolton.

Births, Marriages, and Deaths.

BIRTHS.

MCGEAGH.—On the 13th inst., at Gransden Hall, Hunts, the wife of William McGeagh, M.D., of a son.

PETERS.—On July 11th, at Langwathby, Rickmansworth, the wife of Edwin Arthur Peters, M.D. Cantab., of a daughter.

MARRIAGES.

BOX—BEDFORD.—On July 13th, at the parish church, Ealing, by the Rev. R. Dixon Box, brother of the bridegroom, assisted by the Rev. Dr. Oliver, vicar, and the Rev. W. de Burgh, Stanley Longhurst Box, M.D. Lond., D.P.H. R.C.S. Eng., second son of Joseph Box, of Avenue Lodge, Ealing, to Mary Louisa, younger daughter of Robert Bedford, of Marston, South Ealing.

LEWIS—KIMBER.—On July 13th, at St. Stephen's Church, Wandsworth, Charles Mortimer Lewis, M.R.C.S. Eng., L.R.C.P. Lond., to Jessie May Kimber, younger daughter of Henry Kimber, M.P., of Wandsworth.

DEATHS.

DOMENICHETTI.—On July 12th, at his residence, Woodhall Spa, Richard Domenichetti, M.D., L.R.C.S. Edin., Deputy-Inspector-General, Honorary Physician to the King, aged 78.

MOSES.—On June 3rd, at Amoy, Southern China, of typhoid fever, John Moses, M.R.C.S. Eng., L.R.C.P. Lond., aged 31 years.

NEALE.—On July 16th, at London-road, Leicester, John Headley Neale, M.B. Edin., M.R.C.P. Lond., aged 51 years.

RIGGE.—On July 12th, John Arthur Rigge, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of Henley-on-Thames.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

GOVERNMENT DEPARTMENTS AND MEDICAL CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—I should be obliged for your advice on the following. I was attending a postman, X, as a private patient and I had no connexion, official or otherwise, with the Post Office. After the man had been ill a few days the postmaster here said that the Post Office required a medical certificate of the man's state, and asked me to furnish one. I sent him the required certificate. A month or two later he asked me if the man would be able to resume his work, and I informed him that he would be permanently disabled. He then said that the Post Office required a medical certificate to that effect so that they might appoint a permanent postman instead of a substitute, and asked me to give him one. I sent him the required certificate. At no time was any reference made to the patient—i.e., that he should supply the certificate—nor was the patient consulted about the certificates, though I subsequently mentioned to him that I had so certified. On July 1st I sent the postmaster here a bill for 10s. 6d. for the two certificates and asked him to forward it to the proper quarter. He to-day returned my bill with a curt note that "I am instructed to inform you that X has no claim on the Post Office Department." I made the bill out to the Postmaster-General. Is my bill a fair one? and is the amount due by, and recoverable from, the Postmaster-General? I do not claim the amount from the patient X. An answer in your columns will oblige.

I am, Sirs, yours faithfully,

July 11th, 1901. H. P. A.

*** We cannot undertake to give legal advice nor could a lawyer do so without fuller details as to the precise circumstances attending each of the two requests for a certificate. All such cases if they are brought into courts of law depend upon the several facts proved with regard to them and no two cases are alike. Speaking from H. P. A.'s letter we do not see that he has much to complain of on general grounds as to the first certificate, at any rate. An employé desiring to be excused from work can hardly expect his employer to pay for the medical certificate which obtains him leave to be absent. It is, however, important in all cases where doubt may arise that the medical practitioner should ascertain definitely beforehand who will be liable to repay him for his services. The making of the necessary inquiry or the stating of the conditions upon which he will act cannot be more disagreeable than having to enter into a discussion, and possibly litigation, afterwards.—ED. L.

THE PRINTER AGAIN.

OUR esteemed contemporary, the *Journal of the American Medical Association*, in its issue of July 6th, 1901, has on its contents page under the heading "Addresses," the following startling title, "Poverty and Pregnancy: their Cause, Prevention, and Cure." That poor people do sometimes attempt by various measures, some of which are unpleasant, some of which are injudicious, and some of which are illegal, to escape the responsibilities while enjoying the privileges of matrimony is well known. But it is so contrary to the medical view of what is right publicly to advocate the prevention of pregnancy as a cure of poverty that we turned to the article with apprehension. Yet we might have guessed to whose jocosity we had fallen a victim. It was the merry printer. Within the pages of the journal the article receives its proper heading—viz., "Poverty and Degeneracy: their Cause, Prevention and Cure."

DUTCH WOMEN AND CHILDREN FUND, VICTORIA LEAGUE.

To the Editors of THE LANCET.

SIRS,—At the invitation of the Victoria League a committee has been formed of a number of well-known ladies and gentlemen of both political parties who have joined together to give their help for the relief of the sick women and children in the Boer concentration camps. The committee has been appointed with the full approval of the Secretary of State for War.

The aims of the committee are purely philanthropic, absolutely non-political. There is at present undoubtedly much sickness in the Boer concentration camps, particularly amongst the women and children. The British officers in charge of the camps and their civilian assistants, under difficult conditions, are doing their utmost for the people under their care, but the numbers with which they have to deal are large and some suffering is unavoidable. If by well-directed private effort extra comforts and clothing could be distributed to those women and children who are most in want much of this suffering might be prevented. It is thoroughly appreciated by the Government that there is in the concentration camps considerable scope for the exercise of properly regulated private charity, and ladies are now being appointed by the War Office who will visit the camps and will give their help in the distribution of gifts from private sources. A considerable sum has already been subscribed, but much more is needed. The committee of the "Dutch Women and Children Fund" is therefore obliged to call on the generosity of the British people, and it confidently appeals to men and women of all opinions to give their help liberally to this work of pacification, of simple charity and humanity. Pecuniary help will be most useful and the most appreciated. All cheques should be sent to Miss Talbot, Honorary Treasurer, Dutch Women and Children Fund, Victoria League, Dacre House, Victoria-street, S.W. Cheques should be marked "Dutch Women and Children Fund," and crossed "London and Westminster Bank, Limited." For private individuals it is not advisable to buy clothing or hospital comforts for presentation to the committee, but from merchants and manufacturers, and from working parties, gifts of new clothing, material, medicine, and hospital comforts will be gratefully received. A memorandum of directions, as a guide to those who wish to make gifts in kind, is being circulated. All packages intended for "The Dutch Women and Children Fund" should be sent, carriage paid, to Messrs. Barnes and Co., Limited, Battle Bridge-lane, Tooley-street, S.E., who have kindly consented to act as agents and shippers to the committee. All communications and inquiries should be addressed to the Honorary Secretary.

I am, Sirs, yours faithfully,

G. BONHAM-CARTER, Honorary Secretary.

Dutch Women and Children Fund, Victoria League,
Dacre House, Victoria-street, S.W., July 13th, 1901.

*** Pressure on our space compels us to omit the names of the members of the committee.—ED. L.

THE WEIR-MITCHELL TREATMENT.

To the Editors of THE LANCET.

SIRS,—I shall feel much obliged to any of your readers for information respecting either a private home or an institution where a little girl, aged eight years, can be received for treatment mainly upon the lines of the Weir-Mitchell plan? The parents are in a position to pay a fair remuneration but not very high charges.

I am, Sirs, yours faithfully,

July 15th, 1901. SPES.

NOTE ON LARGE FŒTUS.

To the Editors of THE LANCET.

SIRS,—On the 4th of this month I delivered Mrs. —— of a male child weighing 16 pounds. It was of the length and size of a child six or seven months old. Owing to the difficulty in extracting the shoulders it was stillborn.—I am, Sirs, yours faithfully,

J. MCCONNELL, M.B. R.U.I., M.R.C.S. Eng.

Battersea-rise, S.W., July 9th, 1901.

"THE FREAKS OF MEMORY."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent A. Pariss in THE LANCET of July 13th, p. 116, I think he will find similar cases to substantiate the very interesting one he quotes recorded in the late Professor Sir T. Grainger Stewart's book on Nervous Diseases.

I am, Sirs, yours faithfully,

JOHN ROBERT WILLIAMS, M.B. Edin.

Penmaenmawr, July 14th, 1901.

A NEW ADHESIVE TAPE PLASTER.

WE have received from the St. Helens Cable Co. a sample of a new rubber tape which is prepared by coating one side of a sheet of previously vulcanized rubber with a facing of pure Para rubber. The pure rubber remains very adhesive, and the tape if wrapped round the finger or over any bandage or dressing forms a perfectly water-tight covering. It is sold at 5s. 6d. per lb.

GERMAN HEALTH RESORTS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers oblige me by informing me of the best route either to Nordrach or Nauheim, or both places, with the cost of journey for two medical men? I wish to combine the pleasure of a holiday with the profit of a personal visit to the sanatoria for consumption and heart disease. I am, Sirs, yours faithfully,

Kent, July 16th, 1901. VIATOR.

R. K.—If our correspondent inquires of his usual medical attendant he will obtain the information which he desires.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 18th, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
July 12	30·05	SSW	...	113	85	60	67	74	Fine
,, 13	30·07	ENE	...	103	72	61	61	65	Cloudy
,, 14	30·09	N.E.	...	103	70	56	59	62	Overcast
,, 15	30·00	N.E.	...	123	81	60	60	65	Cloudy
,, 16	30·16	S.	...	129	85	61	61	69	Fine
,, 17	30·25	S.	...	129	88	60	62	70	Fine
,, 18	30·20	E.	...	124	86	68	64	75	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

FRIDAY (26th).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish-square, W.).—5.30 P.M. Annual General Meeting. Annual Report of Council. Election of Council and Officers for 1901-1902.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Consultation. (Skin.)

TUESDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. Taylor: Consultation. (Medical.)

WEDNESDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. P. W. De Santi: Consultation. (Surgical.)

LONDON HOSPITAL MEDICAL COLLEGE (Anatomical Theatre of the College).—4 P.M. Mr. Jonathan Hutchinson: Syphilis in relation to Tumours and New Growths.

THURSDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Poynton: Demonstration of Selected Cases.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

BRITISH MEDICAL ASSOCIATION MEETING AT CHELTENHAM.

DURING the forthcoming meeting of the British Medical Association at Cheltenham the representatives of THE LANCET can be consulted at the Queen's Hotel with regard to our reports of papers and proceedings.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1901, which was completed with the issue of June 29th, and the Title-page to the Volume, were given in THE LANCET of July 6th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 12*s.*, carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates on this or any other ground should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

During the week marked copies of the following newspapers have been received:—*Yorkshire Post, Mining Journal, Public Health, Liverpool Daily Post, Leeds Mercury, Reading Mercury, Windsor and Eton Express, South African News, Hertfordshire Mercury, Surrey Advertiser, Bristol Mercury, Shepton Mallet Journal, &c.*

Communications, Letters, &c., have been received from—

A.—Dr. T. M. Allison, Newcastle-on-Tyne; A. B., Brockenhurst; Professor Clifford Allbutt, Cambridge; Monsieur J. Astier, Asnières; Messrs. Allen and Hanburys, Lond.; Apollinaris Co., Lond.

B.—Mr. T. H. Brocklehurst, Stourbridge; Messrs. J. and H. Bell, Nottingham; Dr. G. F. Baker, Lond.; Mr. W. H. Baker, Lond.; Berrow's Worcester Journal Co., Worcester; Mr. J. Burns, Lond.; Bradford and West Riding Medico-Ethical Union, Secretary of; Burnley, Town Clerk of; Messrs. Burroughs, Wellcome and Co., Lond.; Dr. J. Brownlee, Glasgow; Lieutenant-Colonel David Bruce-Maitland, Cape Town; Surgeon A. O. Bobarit, R.N., Lond.; Birmingham University, Secretary of; Dr. W. L. Blandford, Newcastle-on-Tyne; Dr. D. Blair, Lancaster; Dr. D. M. Browne, Rye; Messrs. Boulton and Paul, Norwich; C. Birchall, Ltd., Liverpool.

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J.—Dr. A. H. James, Aberystwyth; J. T. S.; J. C. U.

K.—Mr. C. E. Keatley, Lond.

L.—Captain C. Lane, I.M.S., Calcutta.

M.—Mr. J. D. Marshall, Lond.; Miss B. G. Macdonald, Poona City; Manchester Clinical Hospital, Secretary of; Dr. S. K. Mullick, Lond.; *Midland Counties Herald*, Birmingham; Manchester Medical Agency, Secretary of.

N.—National Canine Defence League, Secretary of; Mr. H. Needes, Lond.; North Wales Counties Lunatic Asylum, Denbigh, Secretary of.

O.—Oldham Infirmary, Secretary of.

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R.—Dr G. Rennie, Sydney, N.S.W.; Mr. G. W. Ruff, Lond.; R. K.; Royal South Hants Hospital, Southampton, Secretary of.

S.—Dr. E. S. Sladen, Cambridge; Smith's Advertising Agency; Mr. Prideaux Selby, Teynham; Dr. F. W. Smith, Harrogate; St. Mungo's College, Glasgow, Secretary of; Mr. J. Sheeham, Lond.; Mr. J. Startin, Lond.; Mrs. Skinner, Winchelsea; St. Bartholomew's Hospital, Rochester, Clerk of; Messrs. Simpkin, Marshall, and Co., Lond.; Dr. C. S. Storrs, Reading; Messrs. S. Smith and Son, Lond.; Messrs. G. Street and Co., Lond.; Scholastic, Clerical, &c., Association, Lond.; Dr. H. A. Scholberg; Lond.; Mr. N. Smart, Folkestone.

T.—Dr. G. Thornton, Pretoria; Mr. Pugin Thornton, Canterbury; Mr. C. S. Thistlethwaite, Ashton-on-Mersey; T. J. C.; *Temperance Critic*, Lond., Editor of.

W.—Dr. W. B. Warrington, Liverpool; Messrs. Wright, Dain, and Co., Birmingham; Worksop Dispensary, Secretary; West Riding County Council, Sanitary Committee of; Messrs. W. Wood and Co., New York; West Ham Hospital, Stratford, Secretary of; Messrs. Willing, Lond.; Mrs. Williams, Leicester; Messrs. Wallach, Lond.

Y.—Yorkshire College, Leeds, Registrar of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. G. N. Adams, Bridgend; Alpha, Kew Gardens; A. W. H.; Mr. D. E. Auklesaria, Ahmedabad, India; Mr. J. Andrews, Eastbourne; Agricultural College, Aspatria; Mr. J. D. Athey, Bishop Auckland.

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